NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA

THESIS

OVERHEAD COST ALLOCATION AT MILITARY SEALIFT COMMAND, PACIFIC

by

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December, 1994

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REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	December 1994.	Master's Thesis

4. TITLE AND SUBTITLE OVERHEAD COST ALLOCATION AT MILITARY SEALIFT COMMAND, PACIFIC

5. FUNDING NUMBERS

6. AUTHOR(S) Hale, Katharine A.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Naval Postgraduate School
Monterey CA 93943-5000

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(maximum 200 words)*

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14. SUBJECT TERMS Military Sealift Command, Pacific, Overhead, Allocation, DBOF

15. NUMBER OF PAGES 81

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	UL

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. 239-18 298-102

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OVERHEAD COST ALLOCATION AT MILITARY SEALIFT COMMAND, PACIFIC

by

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Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1994

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The purpose of this thesis is to examine overhead costs and allocation methods at the Military Sealift Command (MSC). The command's overhead expenses from Fiscal Year 1988 through 1994 are reviewed and followed by a description of MSC's current method of allocating overhead to specific shipping arrangements. Possible sources of information distortion involved in indirect overhead allocation are discussed, and an alternative method of allocating overhead to ships is suggested. Finally, the recommended method of overhead allocation is incorporated into a Cost Simulation Model developed for MSC, Pacific (MSCPAC) using the Crystal Ball® simulation add-in to Microsoft Excel®.

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The reader is cautioned that computer programs developed in this research may not have been exercised for all cases of interest. While every effort has been made, within the time available, to ensure that the programs are free of computational and logic errors, they cannot be considered validated. Any application of these programs without additional verification is at the risk of the user.

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I. INTRODUCTION AND PROBLEM STATEMENT

This chapter will provide background information on Military Sealift Command's, relationships, missions, organization and funding. A discussion of cost accounting, specifically, overhead costing and allocation, follows to introduce the issue of this thesis: overhead allocation at Military Sealift Command, Pacific. Those familiar with the command, the Defense Business Operations Fund and cost accounting procedures may want to move directly to Chapter II.

A. MILITARY SEALIFT COMMAND (MSC)

1. Command Relationships

Military Sealift Command (MSC) is the Department of Defense's (DoD) ocean going transportation organization. MSC is the Navy component command of the US Transportation Command (TRANSCOM). TRANSCOM, established in 1988, is the unified command responsible for coordinating the efforts of all the services for common user transportation worldwide. Common user means that more than one service uses that transportation service. The Air Force component of TRANSCOM is the Air Mobility Command (AMC), and the Army component is the Military Traffic Management Command. Recently, a fourth component command, the Defense Courier Service, was established as part of TRANSCOM as well.

2. Mission

MSC's primary mission is to "provide sea transportation of equipment, supplies and ammunition to sustain US. forces

operational requirements dictate." (MSC Backgrounder, p. 1) Under the broad mission of providing "sea transportation," MSC maintains three forces: Naval Fleet Auxiliary Force (NFAF), Special Mission Support Force (SMS), and the Strategic Sealift Force. (MSC Backgrounder, p. 1)

At the broadest level, MSC handles two types of services: common user and service unique. Common user programs are some times referred to as DBOF-T (transportation) programs, and MSC's service unique programs are sometimes referred to as DBOF-N (Navy) programs. As mentioned before, common user services are those used by more than one service. Strategic Sealift forces do the bulk of this work. Their mission is to deploy and sustain US military forces, wherever needed, through delivery of equipment, petroleum products and other supplies. (MSC Backgrounder, p. 2) SMS covers some work for the Air Force and other agencies, but is primarily service unique, or Navy, in nature. Its work includes oceanographic research, missile tracking, coastal surveying and cable laying and repairing. NFAF provides direct support for Navy combatant ships including food, fuel, and ammunition.

3. Organization and Funding

MSC has offices all around the world. Currently, MSC is headquartered in Washington, DC, and four major area commands are located near the operations they conduct. MSC Europe (EUR) is in London, U.K.; MSC Far East (FE) is in Yokohama, Japan; Bayonne, NJ is home to MSC Atlantic (LANT); and MSC Pacific (PAC) is located in Oakland, CA. In addition there are three sub-area commands in Norfolk, VA; Naples, Italy; and Guam. (MSC FY 1995 Planning Budget Service Unique Submission, p. A-1)

Within each program there are several types of arrangements for obtaining shipping services. They are based on who owns and operates the ships providing the services. Nucleus ships are owned and operated by the government. These ships are usually so specialized they cannot be found in the commercial market, and military personnel are required to carry out the mission. Contract operated ships are owned by the government. These are also ships that are difficult to find in the commercial market, but the manpower is provided by Civilian Mariners, or CIVMARS. Time charter ships are rented by the government and operated by contractors.

Different perdiem rates are established for each ship based on the direct and indirect expenses expected to be incurred by that ship in the coming year and the number of days it will be available for service. The projected revenue for each type of ship has to cover the projected expenses. These rates are recalculated each year and submitted as part of MSC's budget. Depending on how many ships are in the inventory, how much maintenance is required in a particular year and how much money headquarters is spending, the rates can vary tremendously from year to year.

B. DEFENSE BUSINESS OPERATIONS FUND

1. Concept

MSC has worked under the Defense Business Operations Fund (DBOF) since October 1991 when the Navy Industrial Fund, a similar revolving fund, was assimilated into the DBOF. Under this concept, MSC receives a pool of working capital, or corpus, from the fund to conduct its operations. MSC charges its customers for the services it provides. All

of the costs of operation, including headquarters operations, for MSC and TRANSCOM must be recovered through the per day or perdiem rates MSC charges for service. This situation is comparable to commercial shipping operations except that MSC's goal, as with other DBOF operations, is to break even, not to gain a profit. (DoD Comptroller, 1990)

2. Objective

The objective of DBOF is "full cost recovery" by the end of the budget year. (DoD Comptroller, 1990) In order to have full cost recovery, one must first have full cost visibility. In the past, some costs such as military labor and headquarters costs were not considered as part of the cost that customers had to reimburse. It is a continuing challenge to identify and provide visibility of all the costs of doing business for DBOF activities. (Naval Postgraduate School, 1994, p. N-2)

3. Operating Policies

Even though DBOF activities gain their budget authority based on customer orders, they still must gain approval for their budget, including the rates they intend to charge, capital costs, and operating costs through a formal OSD process. Also, some costs, including military personnel costs, that were paid for with appropriated funds, are now considered part of the reimbursable expense of doing business. As a consequence, rates for DBOF goods and services have increased.

In order to increase the visibility of operating costs, each DBOF business area has a capital budget in addition to its operating budget. Investment expenses for equipment, computer software, minor construction, and other

improvements costing over $15,000 will be funded with the capital budget and depreciated. Many of the items in the capital budget are considered overhead expenses.

C. COST ACCOUNTING

1. Definition

Any discussion of overhead costs must begin with some terminology and discussion of basic cost accounting. Cost accounting is "the field of accounting that measures, records, and reports information about costs." (Deakin and Maher, 1991, p. 4)

2. Uses

The two main uses of cost accounting systems are for decision making and for performance evaluation. When the decisions and evaluations are made within the organization, costs are used for managerial accounting. When information from the cost accounting system is used by those outside the organization for decisions regarding the organization and evaluations of top management, costs are used for financial accounting purposes. (Deakin and Maher, 1991,p. 5) When MSC budget analysts and accountants are studying costs to make decisions regarding the best course of action to recommend, they are engaging in managerial accounting. When the General Accounting Office (GAO) comes to look at MSC's books, they are engaging in financial accounting.

When managers are making decisions as to which course of action to take, they usually consider costs that change in response to a particular course of action, also known as differential costs. (Deakin and Maher, 1991, p. 6) For example, if MSC needed an additional ship, it could purchase

a new ship outright or it could lease one. What costs would change as a result of purchasing the ship or leasing the ship? From a purely managerial accounting perspective, the bottom line is which form of ship acquisition would cost less?

Within an organization, there are usually various responsibility centers. Managers of these centers are accountable for the performance of specific functions of the business. Their success can be quantitatively measured using cost accounting methods. There are costs that can be controlled directly by the responsibility center, and there are costs that are part of the whole business and beyond the control of the responsibility center manager. Managers are evaluated, among other things, on the degree to which they execute the budget as planned.

3. Job Order Costing

> The purpose of a job order cost accounting system is to assign and accumulate costs for each job, that is, an order, a contract, a unit of production, or a batch... This system allows more control, less estimation, and more direct and reliable allocation of costs. (DoDM 7220.9, 1987, p. 72-1)

At MSC, job orders come in several different forms. Sometimes, a job can be a cargo shipment. Other times it is providing a platform for oceanographic experiments, or providing fueling services to a ship underway. The point is that a job order is a discrete amount of work provided to a customer. All of work and material required to complete the job order is accumulated in one place. A more generic term for a job order is a cost object.

4. Cost Objects

Cost objects are any functions for which cost is accumulated in order to meet information needs of managers for operational decision making (Fultz, 1980, p. 2). One obvious need under DBOF is the need to develop an accurate billing rate for services provided. The objectives can be related to output objectives such as products and services or client contracts; or they can be related to organizational cost objectives such as plants, offices or departments. These two broad categories of cost objects can be further segregated into direct and indirect.

- Direct costs - These costs can be traced directly to a specific product or output and are incurred only by the function that produces the output, such as hands-on labor or material used for the product. (Naval Postgraduate School, 1994, p. N-12)
- Indirect costs - These costs cannot be traced to a single product or output, but they are borne by all job orders. The two types of indirect costs are production overhead costs and General and Administrative (G&A) costs. (Naval Postgraduate School, 1994, p. H-11)
    - Production Overhead - These costs, while not attributable to a single job or output, can be traced to a group of jobs. The costs are distributed to each job by use of a predetermined rate set by each production cost center. (Naval Postgraduate School, 1994, p. H-11)

- General and Administrative Overhead (G&A) - These costs are associated with headquarters operations, comptroller's offices and civilian personnel offices and cannot be traced to specific job orders. The costs are distributed to each job by using a predetermined overhead rate which is based on the budgeted output of the entire activity (all cost centers). (Naval Postgraduate School, 1994, p. H-11)

It is important to distinguish between the two different types of indirect costs. Production overhead "is a cost applied to determine the cost of goods sold" (DoDM 7220.9, 1987, p. 72-7). G&A "is a period expense that appears in the statement of operations after determining net sales (gross sales less cost of goods sold)" (DoDM 7220.9, 1987, p. 72-7). G&A is considered a period cost, or an "expense of the accounting period and that should not be attached to the product or service" (Fultz, 1980, p. 11). According to DoD Accounting Policy:

> G&A expenses are accumulated in the activities' indirect cost centers and charged to customers by equitably prorating the expense to job orders. A rate is established in order to prorate the expense to customer job orders. Customers are billed for the G&A expense allocated to their job orders when required in accordance with the guidance contained in Chapter 26 of this Manual. (DoDM 7220.9, 1987, p. 72-7)

Chapter 26 goes on to say with regard to indirect costs, "If an organization has a significant amount of reimbursable effort, such costs are accumulated in a cost

pool and allocated to customers." (DoDM 7220.9, 1987, p. 26-12) Cost pools are groupings of similar cost accounts according to purpose. While this may sound fairly cut and dried, management has some degree of freedom in grouping costs into meaningful pools. One general rule of accumulating costs to pools is, "If the cost of more precise measurement is greater than the expected benefit received, the cost should be treated as an indirect or overhead expense" (Fultz, 1980, p. 7).

5. Cost Drivers

Ideally, all costs would be directly tied to specific jobs because the billing of customers would be much easier to execute and to justify. For every job, certain activities must be completed. Each of these activities has a cost associated with it. These required activities are called cost drivers (DoDM 7220.9, 1987, p. 42). It is important to note that some costs, such as direct labor and direct material used, change with a change in output, while others, such as G&A, do not change that much with changes in the volume of production. Assigning variable costs of direct labor and direct material to a job is fairly straightforward: total the cost of labor and divide by the number of hours worked to assign a dollar cost of labor per unit of output. Direct material can be handled the same way. The useful allocation of indirect costs to a job is considerably more difficult and subjective.

6. Unit Cost Goals (UCG)

UCGs are the estimated costs for producing each unit of output. It is important to calculate these goals accurately because they represent the rates DBOF customers have to pay

for goods and services. In the case of MSC, each side of the house has different outputs. On the DBOF-T side, output is measured in millions of Measurement Ton (MTON) Miles. On the DBOF-N side, output is measured in days at sea. The UCG for each output is determined according to the following formula:

Σ(Direct Costs + Indirect Costs)/Projected Units of Output = UCG.

While this formula appears rather straightforward, the issue of allocating Indirect Costs, especially General & Administrative Costs, can be difficult.

D. ALLOCATION OF INDIRECT COSTS

1. Objective

Indirect costs are incurred for all cost objectives, not for a single cost objective or job order. The goal of allocating indirect costs, both overhead and G&A, is to do so in the most accurate manner possible. While indirect costs cannot be directly assigned to jobs, some jobs do incur more overhead expense than others. The trick is to determine the best way to measure the relationship between the various jobs and indirect expenses. DoD states in its Accounting Policy:

> Various methods for allocating overhead include direct labor hours, direct labor cost, machine hours, or material cost. The method chosen must be used consistently from one period to the next in order to permit meaningful comparisons. The direct labor hour method for allocating overhead costs is approved for DoD use. Use of any other basis shall be approved by the Director for Accounting Policy, OASD(C). (DoDM 7220.9 revised December 14, 1987, p. 72-9,10)

The allocation bases mentioned above (direct labor, direct materials, etc.) refer to measures "that can be directly related to two or more cost objects and (can be) considered to approximate the proportion of a common cost shared by two or more cost objects." (Deakin and Maher, 1991, p. 1035) In other words, using an allocation base is a way of logically assigning overhead costs to job orders. Allocating overhead to job orders is arbitrary by definition. Indirect costs, or overhead, cannot be traced to a single cost object or job order. But it is important to try to pick a meaningful allocation base so that costs assigned to a particular job are reasonable to the DoD customer who has to pay the full cost of the product or service provided.

2. Methods of Allocation

At the beginning of an accounting period, predetermined rates for both kinds of indirect costs are calculated by estimating and totaling production overhead costs and G&A costs separately. Each of these totals is divided by the budgeted amount of the allocation base, often direct labor hours.

The resulting predetermined rates for overhead and G&A are applied, or assigned, to a job or other cost objective by multiplying that predetermined rate by the actual amount of allocation.

E. OVERHEAD VARIANCE

At the end of the period, overhead variance is determined by comparing the actual overhead costs to the applied ones. If applied overhead is greater than actual

overhead, it is considered an overapplication; if actuals are greater than applied, an underapplication has occurred. Analysis of overhead variance can aid managers in evaluating both the accuracy of the allocation system and of their performance in controlling costs. (Naval Postgraduate School, 1994, p. H-12)

F. ACTIVITY BASED COSTING

Activity Based Costing (ABC) is a costing method that derives product and service cost as the sum of the cost of the activities that occur to make the product. ABC meets managers' needs for more detailed analysis of what causes cost. Instead of the usual method of dividing the total cost of producing a good or service by the number of units of output to arrive at a unit cost, ABC starts with the detailed activities involved in producing a good or service. The three steps in ABC are as follows:

- Identify the activities or transactions that cause costs to occur. These activities are called Cost Drivers.
- Assign a cost to each activity.
- Sum the costs of the activities that occur to make the product or service.

The advantage of ABC over current costing methods is that accurate costs are developed for each good or service that an organization produces, allowing managers to make informed decisions about specific responsibility centers. ABC is usually more expensive to implement than conventional accounting systems, but sometimes the benefits of doing so outweigh the costs. (Deakin and Maher, 1991, pp. 41-43)

While ABC is a "revolutionary" approach compared to cost accounting methods used in DoD today, this thesis must consider a more "evolutionary" approach because it is beyond the scope of this work to completely revamp MSC's accounting system.

G. PROBLEM STATEMENT

How does all this relate to allocation of overhead at Military Sealift Command? As in all DBOF activities, over the past several years, costs have been rising. One area of particular concern to MSC is their rising overhead. As of fiscal year FY 94, overhead expenses were over $206 million in constant 1995 dollars, almost nine percent of the direct cost of operations. This increase of almost $111 million, or 117 percent, since FY 88 has to be covered by rates charged to customers(MSC Financial Statements).

It is imperative that MSC be able to develop rates that accurately reflect the cost of doing business. In the volatile shipping industry, this is a difficult task. Lieutenant Commander Terry Redman has developed a cost simulation tool that can rapidly assimilate many factors of cost and predict perdiem rates for two specific ship types in MSCPAC's inventory. The ships types are T-AO 187 Class Tankers and T-ATF 166 Class Fleet Ocean Tugs. The one area that he had difficulty in making accurate predictions was in overhead expenses. (Redman, 1994, p. 113)

This thesis will attempt to answer the questions: How does MSC develop overhead costs? What does it include, and how has it changed over the past several years? Then, it will attempt to develop a way to accurately forecast

overhead expenses for cost management or simulation model such as LCDR Redman's model.

The remainder of this thesis is arranged as follows:

- Chapter II describes MSC's historic overhead expenses.
- Chapter III describes MSC's current overhead allocation process.
- Chapter IV proposes an alternative allocation system.
- Chapter V attempts to complete the cost simulation model.
- Chapter VI provides the conclusions.

II. HISTORICAL OVERHEAD EXPENSES

This chapter will describe the overhead accounts and spending trends from FY 88 through FY 94 with emphasis on the types of expenses included in the overhead accounts and areas of change.

A. MSC DEFINITION OF OVERHEAD

Budgeting and accounting services for MSC are centralized at the Commanding Officer Military Sealift Command (COMSC) or, as it is sometimes called, Headquarters. Headquarters coordinates the budget and pays all of MSC's bills for all areas. All financial and budget information is held in a mainframe computer called the Financial Management Information System (FMIS). The command has only two types of expenses: "overhead (G&A), which includes everything on shore; and direct ships operating costs." (Brown, 1994) In other words, instead of the usual two types of indirect costs: production overhead and G&A, there is only one type that includes all activities at every MSC shore office around the world. Direct, or non-overhead, costs are defined as only those costs incurred aboard ship.

Interestingly, until FY 92, Headquarters costs were not considered a part of overhead because they were paid for with appropriated funds. Additionally, beginning in FY 94, TRANSCOM has levied an additional overhead burden on MSC and the other component transportation commands. The component commands pay for all of TRANSCOM's costs. By FY 97, this will amount to $30 million annually. Chapter III, Section A describes TRANSCOM's method of allocating costs to their component commands.

B. MSC OVERHEAD ACCOUNTS

Terminology regarding overhead expenses can become confusing. For purposes of this chapter, there are four levels of detail to be considered: Total General Expenses, Categories, Account Groups, and individual Accounts. The sum of all expenses ashore will be referred to as Total General Expenses. The following sections describe the next three levels of detail.

1. Categories of General Expenses

The two broad categories of General Expense are Salaries and Wages Expense, and Overhead Expense. Theoretically the former category deals with personnel wages and related expenses and the latter with all other expenses ashore. The division is not completely clean as described in the next section.

2. Account Groups

Within the two broad categories are 31 Account Groups. Table 1 lists general categories and account groups used in MSC's annual financial statements. These account groups have remained fairly steady since at least 1965. (Ainsworth, 1965, p. 23) The exceptions alluded to in the previous section include the Cash in Lieu of Quarters and Foreign National Indirect Hire (FNIH) account groups. These two have shifted between the S&W and Overhead categories. Cash in Lieu of Quarters is money paid to overseas civilian employees for housing. FNIH employees are hired under an agreement between a host government and the US government in the foreign country. (DoDI 1400.10, 5 December 1980, p.3) Another group that seems as though it should be in S&W, the

Medical Expense, Civilian Personnel group, which includes expenses for medical supplies as well as medical emergency services, is in the Overhead category. MSC's annual Financial Statements present Total General Expenses to this level of detail.

3. Accounts

Each account group (Travel, Public Information, etc.) comprises at least one and usually several individual accounts. As part of recent cost visibility efforts, MSC accountants are working on the possibility of rearranging these categories. While the titles of account groups used in annual financial statements have not changed a great deal, the individual accounts that compose them have.

The most basic element in MSC's accounting system is the expense account. Each account has a long title (e.g., Regular Pay - Classified) and a four digit account number associated with it (sometimes called a GLA). Every penny spent by the organization has to fit into one account or another. Keeping the actual costs in each account closely related is a constant challenge because although accounting systems need to be consistent over time, they must also reflect meaningful data for management decisions. In FY 94, MSC reassigned and expanded expense account numbers to allow analysts and accountants to see more clearly where the command spends money. The matter is further complicated because MSC has made at least 18 revisions to account numbers since 1965. (MSC account crosswalk of June 1994, revision 18). MSC is grappling with enhancing cost visibility and some changes are probably necessary to reach the goal of full cost visibility. However, one general principle in cost accounting is to maintain consistency of

procedures through time so that meaningful analysis and decisions can be made using available data. As of FY 94, there are no less than 128 separate general accounts. Appendix A comprises a complete current list of account numbers and titles.

C. ASSUMPTIONS

Several assumptions were necessary in order to make meaningful comparisons of MSC's general expenses. As described above, there have been changes in MSC's expense accounts, account groups and categories. To make any analysis of expenses possible, like costs must be compared. While it is possible to format newer (FYs 93 and 94) expense reports in the old format, it is not possible to determine what the older reports would look like under the new expense accounts. For this reason, all comparisons are made using FY 92 and earlier accounts, account groups and categories found in Table 1.

There are several accounts that MSC moved from direct to general expense accounts. These include: Container Maintenance and Repair, Claims, Other Reimbursable Costs, Consumables, Repair Parts/ILS, and Reimbursable Ship Equipage. Since these accounts were not included in pre FY 92 Overhead expenses but showed up in the totals for FYs 93 and 94, they were assigned to the account group that seemed to fit by the author.

The data for this chapter is taken from MSC Financial Statements and FMIS files for the fiscal years 1988 through 1994. To make comparisons meaningful, all costs in this chapter are in constant 1995 dollars (DoD Comptroller, 1994, p. 39). Three different deflators were used: Civilian Pay,

Military Pay and Operations and Maintenance (O&M). The first two deflators were used for the appropriate S&W expenses and the O&M deflator was used for all expenses in the Overhead category because these types of expenses are similar to those paid for by O&M funds in the appropriated budget system.

D. DIRECT VERSUS GENERAL EXPENSES

This section will describe the ratio of general expenses described above to the cost of traffic operations, or direct expenses, incurred by operating ships. From FY 88 until FY 90, this ratio was less than four percent. Operations Desert Shield and Desert Storm occurred during FY 91; the percent of general expenses dropped to 2.6 percent of traffic operations costs. In FYs 92 and 93 the rate jumped to 4.8 and 6.5 percent, respectively. By FY 94, general expenses were 8.9 percent of direct expenses. The percentage has increased because while the constant dollar direct expenses have been steadily decreasing since FY 91, general expenses have been increasing. Some of this growth is expected because of the increased focus on MSC and strategic sealift following those operations in FY 91.

E. CHANGES IN GENERAL EXPENSES

Detailed general expenses by account group are provided in Appendix B, General Expenses for Fiscal Years 1988 through 1994 and Appendix C contains General Expenses by Area Command (FY 88 - FY 94).

Salaries and Wages Expense
Regular
Overtime
Annual, Sick & Military Leave
Ashore Military Labor
Foreign National Direct Labor & Benefits
Employer Contributions
Cash in Lieu of Quarters
Awards
Continuation of Pay
Overhead Expenses
Travel
Public Information
Occupancy of Premises
Office Equipment, Rental & Services
Office Expenses, Stationery & Postage
ADP Equipment & Rental Service
ADP Supplies
ADP Software
Communications
Automotive Equipment Expense
Operational Equipment
Office Equipment Maintenance
Medical Expenses, Civilian Personnel
Design & Development Expense
Foreign National Indirect Labor
Major Real Property Maintenance & Repair
Expense Depreciation Contributed Fixed Asset
Other Overhead

Table 1. General Expense Account Titles (After MSC Financial Statements)

1. Total General Expenses

Overall general expenses have increased 117 percent over the seven year period studied from roughly $95.1 million in FY 88 to $206.1 million in FY 94. The concentration of expenses has shifted from a slight concentration in the Overhead category as a percent of Total General Expenses (52 percent) in FY 88 to a slight concentration in the S&W category (53 percent) in FY 94.

2. Salaries and Wages Expense

This category of expense has increased 138 percent over the period to $108.2 million in FY 94. S&W expenses are continuing to make up a larger portion of General Expenses even though the number of personnel has been up and down over the period as shown in Table 2. While the number of ashore personnel is volatile, the vast percentage of MSC personnel are still afloat. About 84 percent were afloat during the Persian Gulf War period in FY 91; and in FY 92, 78 percent of MSC's labor force was seagoing.

	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
Military	N/A	302	309	286	270	149	269
Civilian	N/A	1,058	1,473	1,575	1,558	1,303	1,616

Table 2. Number of MSC Personnel Ashore
(After MSC Annual Reports FY 88 - FY 94)

The makeup of this category has changed significantly with the introduction of Ashore Military Labor as a rate-recoverable expense in FY 92. In FY 88, the three major account groups by size were Regular Wages of classified (General Schedule) and unclassified (Wage Grade) personnel; Employer Contributions; and Annual, Sick, and

Military Leave (leave taken by civilian personnel including leave for reservists on active duty). Regular Wages accounted for over two thirds of all S&W expenses. In FY 94 the top three account groups were Regular Wages (55 percent of the category), Ashore Military Labor (21 percent), and Employer Contributions (13 percent). This distribution is somewhat misleading due to an understatement of Ashore Military Labor in FY 93 and a "corrective" overstatement of the account group in FY 94. The account is still the second largest in the category.

Despite becoming a decreasing share of the pie, Regular wages are growing at a substantial rate. Between FYs 88 and 94, this largest account has increased by 83 percent. Overtime has increased by 12 percent; Annual, Sick, and Military Leave has grown by 91 percent; and Employer Contributions 143 percent. Much of this growth occurred in FYs 93 and 94, with the establishment of the Central Technical Activity when 134 new personnel were hired for this activity.

Employer Contributions growth has been largely contributed to by federal regulations affecting all industries. This group of accounts includes employers' contributions to health benefits ashore, retirement funds, life insurance, social security, medical. There are currently two different retirement systems in effect: Civil Service Retirement System (CSRS) for employees hired before 1984 and Federal Employment Retirement System (FERS) for those hired after that time. The major difference in the two systems is that the latter has separate social security contributions made by the employer in addition to retirement contributions. Nearly 72 percent of Employer Contributions is made up of nearly equal parts of three accounts:

Employer Health Benefit Contribution Ashore, Employer Retirement Contribution Civilian, and Employer Federal Retirement System Ashore. Between FYs 89 and 94, these three accounts have shown 100, 45 and 143 percent growth, respectively. Like wages, health benefit and retirement contributions seem to be steadily increasing while the onboard population at MSC is vascillating. The much smaller accounts of Employer Retirement Contribution FERS (4 percent of EC) and Employer Medical Civilian Ashore CSRS (5 percent of EC) have grown 315 and 180 percent respectively. Some of this growth is expected due to increasing numbers of FERS employees and the rising cost of health care. However, some of the little accounts seem to be growing disproportionately to other accounts.

Interestingly, several of the very small accounts have shown the highest percentage growth. Awards, while they accounted for only about one percent of the S&W category in both FYs 88 and 94, have increased by 110 percent. While Continuation of Pay makes up less than two-tenths of a percent of S&W, it has increased 230 percent over the period. Continuation of Pay is for workers injured on the job to pay their salary for up to 45 days before workman's compensation begins instead making them take sick leave. (Robert Griffin, MSCPAC Accounting Office, 26 October 1994) Again, the numerically smaller accounts seem to be growing much faster than larger accounts.

3. Overhead Expenses

As illustrated in Table 1, Overhead Expense is a catchall category of expense that covers all expenses ashore excluding S&W. While this category has decreased as a

proportion of all overhead expenses, it has grown by nearly 97 percent in constant dollars between FY 88 and FY 94.

The account groups and accounts in this category of expense have changed as well. In FY 88, the largest accounts were Other Overhead Expense (32 percent), Automated Data Processing Equipment & Rental Service (ADPER&S) (20 percent), and Design and Development Expense (12 percent). In FY 94 the top three accounts were: Other (23 percent of the Overhead category), TRANSCOM (18 percent), and ADPE&RS (16 percent). By FY 94, Other Overhead Expense decreased by nine percent to 23 percent of the category. This decrease as a percentage of the category is attributable to accounting efforts to increase cost visibility by moving costs from the nebulous Other Overhead account group to more meaningful accounts, rather than an actual decrease in expenses. The old Other account, number 5399, has been split up into at least eight accounts including: Professional Management Service, Laundry, Movies and Tapes, Equal Employment Opportunity, Courier Service, Other Contract Services, FECA (Federal Environmental Conservation Act), and Other Miscellaneous Expense. The constant dollar value of the Other Overhead account group has not declined, however, it has grown 43 percent over the period.

Automated Data Processing (ADP) is another growth area for MSC. ADPER&S increased by 54 percent to include 16 percent of the category. ADP Software, in particular, made an astonishing 1,280 percent increase in constant dollars over the period; growing from one-tenth of one percent to over seven-tenths percent of the category. ADP Supplies also grew by 54 percent although it shrunk as a proportion of the category (one-third to one-fourth of a percent). While the dollar figures for some of the accounts are small,

the increasing trend is worth noting. MSC is expending a great deal of effort to move into the computer age. While large systems such as FMIS and the still in-work Expense Tracking System are considered capital investments, all the personal computers and accompanying software are regular Overhead expenses. MSCPAC seems to be the area command that invests the most consistently in all areas of ADP.

Some other "small accounts" also experienced significant growth during the period. Public Information sustained 123 percent growth; Operational Equipment grew 9610 percent in constant dollars (from one-hundredth to one-half a percent of the Overhead category); and Medical Expenses-Civilian Personnel (medical supplies) increased 97 percent but retained its share of the category. One account, Maintenance and Repair of Real Property, showed 491 percent growth since FY 92. This is mainly a factor of deciding exactly what will be covered by this new account.

Not every account in MSC has increased. Some have truly decreased, while others have been rearranged. It is difficult to tell the difference in some cases. For example, Design and Development Expense (D&DE or R&D), while it received a boost in FY 92 (post Persian Gulf War), has declined 27 percent over the period. D&DE fell from 12 percent of the Overhead category, the third largest account group, to just 4.5 percent. Foreign National Indirect Labor, a much smaller account to begin with, fell 67 percent as well. In both cases, there is only one account in the group, so it is fairly clear the costs have decreased. In the case of Office Expenses, Stationery and Postage, the account group appears to have declined, but the costs, at least in part, were merely shifted to other groups. The original account all but disappeared in FY 94, and in its

place are six new accounts including three training supplies accounts, publications and subscriptions, and other supplies. In addition are a whole slew of new Official Mail Cost accounts.

F. SUMMARY

Overall, MSC is a growing business. As discussed, costs in nearly all areas are rising. An area of general concern might be the disproportionate growth of the smaller programs often considered "budget dust." The accounts that make up one percent here or there of MSC's total general expenses will add up rapidly if not closely monitored. Perhaps some form of localized control over these accounts could help manage them better.

III. MSC OVERHEAD ALLOCATION METHOD

All of the costs of MSC's activity ashore and all of TRANSCOM's costs must be recovered through the rates charged to customers for various shipping services the command provides. These costs are in addition to the direct costs of operating ships. The main idea is to distribute the costs in an rational manner, so that each customer is charged for roughly the proportion of overhead expenses involved in the service provided. This chapter will describe MSC's current method of allocating these overhead expenses to shipping arrangements.

In general, the overhead cost pool is allocated in two stages: by program and by arrangement. This means the costs are first distributed to the six operational programs and then costs are further allocated to contracting arrangements within each program. It may be useful to refer to Figure 1, MSC Overhead Allocation Process, while reading this chapter. The information for this chapter was gathered through phone and personal interviews with members of COMSC and MSCPAC budget and accounting offices. Overhead allocation for the entire command is calculated by the headquarters' budget office.

A. COST ACCUMULATION

The pool of overhead costs to be allocated, or distributed, consists of all the costs accumulated by MSC shore commands world-wide plus a portion of TRANSCOM's costs. Each area command (LANT, FE, EUR, PAC) and COMSC feed costs by account, to the budget analysts at Headquarters. Since TRANSCOM itself generates no revenue, all of its costs are considered overhead. TRANSCOM must

Stage One Allocation by program

Input: MSC area command expenses
MSC headquarters expenses
TRANSCOM expenses

Process A: DBOF-N programs
$ rate-recoverable overhead expenses x % "time" per program = $ OH per program

Output A: DBOF-N programs { $ OH NFAF
$ OH SMS

Process B: DBOF-T programs

1) $ rate-recoverable overhead expenses x % "time" per program = $ OH perDBOF-N program

+

2) $ TRANSCOM expenses x % "time" per program = $ OH per DBOF-T program / $ OH DBOF-T programs

Output B: DBOF-T programs { $ OH POL
$OH Cargo
$ OH SPR
$ OH FSS

Stage Two Allocation by arrangement

Input: Output A and B

$ OH NFAF
$ OH SMS
$ OH POL
$OH Cargo
$ OH SPR
$ OH FSS

Process:

$$\frac{\text{sum expected ashore arrangement expenses}}{\text{sum direct arrangement expenses}} = \text{OH expense as percent of direct arrangement expense}$$

Figure 1
MSC Overhead Allocation Process

allocate all of its cost of doing business to each of its four component commands. TRANSCOM allocates its costs to each of its component commands based on the percentage each component contributes to the total operating cost of all component commands. The component with the largest expenditures is allocated the largest share of TRANSCOM's costs.

B. STAGE ONE ALLOCATION - PROGRAM

It is important to keep in mind that MSC has two different business areas, a Service Unique (DBOF-N) and a Common User (DBOF-T) business area. Overhead is allocated to each area separately.

1. Service Unique Program Allocation

First, any reimbursable overhead and TRANSCOM overhead are subtracted from the total pool. Reimbursable overhead is identifiable work completed by a shore activity of MSC for one of its sponsors. This is usually some sort of research and development work. TRANSCOM costs are subtracted before this stage because they are only allocated to DBOF-T programs. The remaining overhead is referred to as rate-recoverable overhead.

In stage one allocation, a dollar amount of the rate-recoverable pool is allocated to each of the programs. Each program (SMS, NFAF, FSS, Cargo, POL, and SPR) receive an overhead control amount based on the percent of time shore commands spend on that program. This is accomplished by summing the total workyears each command reports spending on each of the six programs and dividing it by the total workyears available. Area commands develop their own way of

determining how much time is devoted to each program. The resulting "percent of time" per program is multiplied by the rate-recoverable overhead pool. The product is a dollar "overhead control" figure for each program. For instance:

$$\frac{\text{time spent NFAF}}{\text{MSC total time ashore}} \quad X \quad \$OH \text{ pool} = \$OH \text{ NFAF}$$

The introduction of DBOF has somewhat complicated the allocation of overhead. Programs have been switched back and forth between DBOF-N and DBOF-T. As of FY 96, the DBOF-N programs consist of SMS, NFAF, and FSS (Maritime Preposition Ships and the Hospital ships (T-AH)). (MSC FY 96/97 Planning Budget, p. B-8) DBOF-T has the remaining three.

2. Common User Program Allocation

After the rate-recoverable overhead has been allocated to all six programs, MSC's piece of TRANSCOM's bill is allocated to the three Common User (DBOF-T) programs in the same fashion as the rate-recoverable is distributed to all programs. TRANSCOM does not monitor how each of the components allocates the cost within their commands. They are mainly concerned with the macro view.

C. STAGE TWO ALLOCATION - ARRANGEMENT

Once overhead control figures are allocated to programs, the Service Unique and Common User programs are treated alike. Program analysts spread their overhead control figure to each of the arrangements as a percentage of the direct expenses for that type of arrangement.

Arrangements refer to the relationship between MSC and a specific type of ship, and any contractors involved as

described in Chapter II. Each program has slightly different arrangements. The one described in this thesis is for NFAF (nucleus, GOCO, and time charter) ships in particular. Most other programs have the same arrangements with the exception of Cargo whose arrangements include special charter, commercial breakbulk, commercial container, general agency agreement, and berth term; and POL whose arrangements are much like NFAF with the addition of bareboat/contractor operated. Again, all allocations are reported as a percentage of direct cost for that type of operation. This stage of allocation is accomplished by program analysts at the headquarters budget office.

The NFAF program analyst uses overhead labor dollars as his cost driver. Instead of the percentage of time spent per program used for stage one allocation, he bases allocation on the cost of ashore labor in each arrangement. Each arrangement is allocated part of the overhead cost roughly in proportion to the amount of ashore labor dollars spent on the arrangement. Also a reality check using prior years' actual ratio of overhead costs to direct costs for each arrangement is used to determine next year's overhead rate. The NFAF analyst described it this way:

> I total up the salaries of people I know work on the program and multiply by some factor to account for the other overhead expenses, say two, and then I divide that total by the total direct expense for that kind of ship. (Stump, 31 August 1994)

In formula format:

$$\frac{\$ \text{ arrangement salary} \times 2}{\$ \text{ arrangement direct expenses}} = \begin{array}{l}\$\text{OH as percent} \\ \text{direct expense}\end{array}$$

The resulting percentage is quoted as the overhead rate for that class of ship. In other words the analyst has a pretty fair idea of what the overhead costs are going to be for a

given arrangement. He then works backwards to come up with the percentage.

D. OVERHEAD VARIANCE

As described earlier in Chapter I, overhead variance is the difference between the applied or budgeted amount of overhead and the actual amount spent at the end of the fiscal year. MSC keeps track of overhead variance using the Financial Management Information System (FMIS), a mainframe based accounting system. While this system is located in Headquarters, the area commands can access FMIS using personal computers, landlines, and software called FMIS Gateway. While this system is capable of handling large amounts of information, selective retrieval is difficult. Queries can only be printed to screen or to paper; they cannot be downloaded to floppy disks for further analysis. (Murphy, 31 August 1994)

FMIS Budget Variance Reports can be generated in several different forms. One commonly used lists expenses by account and displays the budgeted figure, actual figure, dollars over- or underapplied, and percent over- or underapplied for the selected month and for the year to date (YTD).

When the budget analyst, ashore programs, is preparing the next year's budget exhibits, she compares the current year's actual and applied overhead in each program to next year's program request. If the program analyst cannot justify any unobligated overhead from previous years, they are not likely to receive an increase in the next budget submission. (Brown, 21 September 1994)

E. CHAPTER SUMMARY

The process described in this chapter is the one currently used by MSC to allocate its overhead expenses to shipping arrangements. While the system meets the criteria of being easy to use and accepted, it does not necessarily allocate costs to products in proportion to how they were incurred.

Chapter IV describes some issues with MSC's current method and proposes an alternative allocation system to reduce these problems.

IV. OVERHEAD ALLOCATION ISSUES

Choosing an overhead allocation process is an important step in accurately costing output, whether it is goods or services. The need to provide accurate cost information must be balanced with the need to keep accounting costs under control. In other words, "the optimal product cost system for a firm, therefore, is not the most accurate one but the one where the benefits of additional accuracy are matched with the expenses of achieving the next increment in accuracy." (Cooper & Kaplan, 1991, p. 4) Cooper and Kaplan feel some commonly accepted indirect methods of allocating overhead, such as the pooling method used by MSC, have the potential to introduce several forms of information distortion. These are:

- Allocating unrelated costs to the output;
- Omitting costs related to a service;
- Costing only a subset of the output;
- Indirectly assigning costs inaccurately to services, which results from:
  - Price distortions, introduced when the cost system is too aggregated and average prices are used instead of specific prices;
  - Quantity distortions, introduced when costs are assigned to services on a basis not perfectly proportional to the resources consumed;
- Allocating joint or common costs. (Cooper & Kaplan, 1991, p. 3)

When studying MSC's overhead allocation method, it seems as though it might be subject to some of these very issues. This chapter will study some of these issues and Chapter V will propose an alternative overhead allocation method designed to mitigate some of these distortions.

A. POTENTIAL SOURCES OF DISTORTION

Originally, MSC's overhead allocation method was probably chosen because of its relative simplicity and general logic. However, this method falls prey to at least two of Cooper and Kaplan's sources of distortion: allocating unrelated costs to the output and indirectly assigning costs inaccurately to services. The following sections will examine these sources in greater detail.

1. Allocating Unrelated Costs to the Output

By its definition, overhead expenses are those that cannot be directly attributed to a specific output. There are activities at TRANSCOM and MSC headquarters that cannot, in a reasonable manner, be allocated to specific outputs. MSC has two major outputs: days at sea and MTON miles. One example of a cost that is not related to specific outputs is Design and Development Expense (D&DE). D&DE for NFAF ship alterations really should not be allocated to programs and ships that produce MTON miles and vice versa.

On a broader scale, MSC is probably paying an overhead bill to TRANSCOM that bears little relevance to the service that command provides MSC. Regardless of which component command TRANSCOM focuses on in a given year, the component with the largest expenses has to pay the largest share of

the burden. While there is not much MSC can do about this, it should be noted.

2. Indirectly Assigning Costs Inaccurately to Services

Both price and quantity distortions seem to be present in MSC's current allocation system. Price distortions are introduced because the current cost system is as aggregated as possible. Recall that all costs ashore are considered overhead. Most expenses are not paid or tracked by area commands because Headquarters accountants do that. The educated guess factor in pricing services provided ashore is especially evident in the second stage of allocation when budget analysts use average prices for labor and all other expenses ashore.

Quantity distortions are introduced because costs are not assigned on the basis of resources actually used to produce a service. The "percent of time per program" allocation base used in stage one is analogous to direct labor hours allocation base but is subject to interpretation by each area command and is not easily measurable. In stage two, allocating overhead expenses as a percentage of direct expense is attacking the problem in reverse. Dividing the estimated overhead expenses for a program by the estimated direct expenses for the program gives an indication of the relationship between expenses involved, not of the relationship between resources used and output produced.

While no overhead allocation system can perfectly distribute costs to outputs, some systems result in more distortion than others.

B. COST CONTROL

One issue of concern to all rational businesses, including DoD, is cost control. The whole DBOF initiative is aimed at providing managers the ability to see and control costs under their authority. Currently, area commanding officers (COs) are judged on their ability to stay within budget limitations. However, under the present system, area COs can justifiably claim they do not have a great deal of control regarding overhead expenditures. Certainly, the amount each CO spends, contributing to MSC's overhead pool, is under his or her control, but the expenditures of all other area COs and Headquarters also determine the amount of overhead allocated to the ships operating out of each port.

C. OVERHEAD BUDGET VARIANCE

Comparing budgeted and actual overhead expenditures reveals the difficult nature of predicting these costs. For example, the FY 92/93 Planning Budget is written during FY 90. This budget shows estimated overhead expenses for FYs 90, 91, and 92. In FY 90 there was less than one percent variance between FY 90 actuals and FY 92/93 Planning Budget overhead estimates. But the predictions for FYs 91 and 92 made in FY 90 were not as good. Comparing the overhead estimates made in the same FY 92/93 Planning Budget to actuals revealed a 14 percent underestimation for FY 91 and a 26 percent underestimation for FY 92. FMIS budget variance reports for FY 93 and FY 94 (YTD July) indicate total overhead was overestimated by 89 and 96 percent respectively. These miscalculations in overhead expense are important because they are used to develop perdiem rates for

the next budget cycle. When rates are inaccurate, MSC as a whole either makes excess profit or loses money in a given year. The difference has to be made up in the following year. It becomes increasingly difficult to reach the goal of breaking even.

Giving area COs more direct responsibility and accountability for overhead expenditures would certainly provide a strong incentive for localized cost control. Hopefully, more accurate cost projections would result that would contribute to more accurate rates charged to customers.

V. ALTERNATE ALLOCATION PLAN

This chapter will propose an alternative overhead allocation plan for MSC. The objective is to allocate overhead expenses in a manner that relates the allocation base to outputs and that provides incentives to control costs. Under this plan, overhead will be allocated by program and by area. Figure 2 is an illustration of this alternate overhead allocation plan.

A. STAGE ONE ALLOCATION

Before beginning the allocation of overhead costs, the current rate-recoverable pool should be considerably reduced. It would consist of expenses incurred by MSC Headquarters and TRANSCOM's bill to MSC. All costs accumulated by area commands would be the base of overhead to be rate-recovered by programs in that area. In other words, all costs accumulated by a geographical region would be recovered by rates charged to customers shipping in that region. Area commanders would have a great deal of incentive to control overhead expenses in their areas.

The remaining rate-recoverable overhead pool would be allocated to programs using a percentage overhead of salary basis. This procedure is similar to the "percent of time per program" allocation basis MSC currently uses but instead of "time," "dollars of dedicated overhead labor per program" would be the allocation basis. While not all personnel ashore are dedicated to a particular program, some are. Only the salaries of program dedicated personnel would be used to calculate the ratio. Then the program ratio would be multiplied by the rate-recoverable pool. There is less guesswork involved in a dollars of salary basis and the data

Alternative Stage One Allocation: by program

Input: MSC HQ $ rate-recoverable OH = DBOF-N OH Pool
MSC's portion $ TRANSCOM OH = DBOF-T OH Pool

Process: Allocating to Programs

$$\frac{\text{\$OH program salary}}{\text{total \$OH program salary}} \times \text{\$ OH pool} =$$

Output 1: $ program OH { $OH NFAF $OH SMS; $OH POL $OH Cargo; $OH SPR $OH FSS

Alternative Stage Two Allocation: by area

Input: Output 1 { $NFAF OH $SMS OH; $POL OH $SPR OH; $Cargo OH $FSS OH

Process : $\frac{\text{units program output for area}}{\text{total units program output}} \times$ $program pool

Output:: $ program OH by area

Example:

PAC:

(PAC days NFAF/total days NFAF) x $NFAF program pool = $NFAF PAC
(PAC days SMS/total days SMS) x $SMS program pool = $SMS PAC
(PAC days T-AH (FSS)/total days T-AH) x $T-AH program pool = $T-AH PAC
(PAC MTONS Cargo/total MTONS Cargo) x $Cargo program pool = $Cargo PAC

$ program OH
+ $PAC area expenses
$PAC OH expenses

Figure 2
Alternative Allocation Plan

is currently submitted to Headquarters in that format by at least one area command, MSC PAC.

Because of the Common User - Service Unique split, this first stage would be split as well. MSC headquarters rate-recoverable cost would be spread to all programs and then the TRANSCOM rate-recoverable cost would be spread to the Common User programs, much the way it is today. For instance:

$$\frac{\text{\$ overhead NFAF salary at HQ}}{\text{total \$ OH program salary at HQ}} \times \text{\$rate-recoverable overhead at HQ}$$

= $ NFAF HQ overhead pool

A similar control number would be calculated for each program. Common User programs would also have a second pot of overhead from TRANSCOM, calculated as above. This would continue to provide cost visibility of TRANSCOM's cost to customers.

B. STAGE TWO ALLOCATION - UNITS OF OUTPUT

In this stage, the units of output for each program are important. There are two basic units of output for MSC programs: days at sea and MTON miles. The NFAF and SMS programs use days at sea as their measure of output; the FSS and Cargo programs use MTON miles. The program overhead pools calculated in stage one are allocated to geographic areas based on percentage of output.
For example:

$$\frac{\text{PAC NFAF days at sea}}{\text{total MSC NFAF days at sea}} \times \text{\$NFAF HQ overhead pool}$$

= $ PAC NFAF overhead

The procedure would be repeated for each of the four programs supported by MSCPAC and the sum of those figures plus all of PAC's own office costs would be the overhead for NFAF ships in the area.

The next question is: How should the total area pool of overhead be allocated? Should the area commanders be required to allocate these costs to the ships in their operating area or should MSC headquarters continue to allocate costs to shipping arrangements? Following the idea of delegating cost control to the area level, it makes sense to allow the area commanders to allocate overhead to ships they serve. It would seem this might be a more accurate method as well, because the area COs are in closer touch with the true costs of providing service in their area than Headquarters personnel are. On the other hand, if MSC Headquarters calculated all of the indirect and overhead allocation, there would be perfect consistency in methods across the command.

C. SUMMARY

The recommended allocation method has some advantages over the current system. First, responsibility for area overhead cost and allocation is delegated to area commanders. This provides close monitoring and scrutiny of costs. Second, costs are allocated to outputs roughly in proportion with the resources used to produce the output. In the alternative allocation plan, stage two is allocated to areas based on units of output rather than an educated guess at the amount of overhead expenses.

While no overhead allocation system is completely accurate, some provide better information than others. The proposed system would require data to be gathered in a

different format than it is today. At the time of this writing, not all the data is available in the format required to allocate costs as suggested in the alternate plan. While PAC does submit data to Headquarters regarding the number and salaries of personnel dedicated to specific programs in their budget submissions, Headquarters does not compile this information on all area commands. While the overhead budget analyst acknowledged that an "extrapolation" could be made from the proportion of salaries dedicated to specific programs to the proportion of overhead expenses allocated to programs, that extrapolation would have to be stated up front.

The data-gathering issue aside, there would probably not be significant costs involved in implementing a system like this one. It seems as though the benefits gained from a system like this one would indeed be balanced by the costs of implementing it. Chapter VI will incorporate a modified version of this system to the Cost Simulation Tool developed by LCDR Redman.

VI. COST SIMULATION TOOL

A. THE MODEL

This chapter will add an "indirect overhead budgeted" feature to the Cost Simulation Tool developed by LCDR Terry Redman given limitations in available data. The Cost Simulation Tool is a computer model designed to run on personal computers with software currently in use at MSCPAC. The Cost Simulation Model was designed in Microsoft Excel® using Crystal Ball® to implement the Monte Carlo simulation. The idea is to provide MSC analysts with real time what-if analysis capability for predicting operating costs of specific ships in MSC's fleet. The ship classes used in designing the model were T-AO 187 Class Tankers and T-ATF 166 Class Fleet Ocean Tugs in MSCPAC's fleet. The model worked fairly well for direct ship operating costs such as salary, training, fuel, port and miscellaneous, subsistence, ship's equipage and voyage repair expenses. "The overhead costs; however, are not precisely known, and when the rough estimate is included in the cost simulation model, the accuracy of the model suffers." (Redman, 1994, p. 114)

This thesis is an attempt to rectify that situation and provide a reasonable overhead cost estimation to apply to the model. The following sections will describe the assumptions used in developing the "indirect overhead budgeted" feature, the alternative allocation process calculations, and some possible conclusions.

B. ASSUMPTIONS

1. Data

Several assumptions were necessary to apply the alternative allocation plan suggested in this thesis to the Cost Simulation Model. Data assumptions relate to the time frame and availability of data.

a. Time frame

The time frame for data will be a subset of the one used in the model, namely FY 93. The current model projects perdiem rates based on monthly expenses. While direct expenses are usually accumulated on a monthly basis, overhead expenses are accumulated over a traditional fiscal year. Overhead expenses are incurred in a pattern resembling appropriated fund expenses, with large quarterly and year end obligations of funds. Therefore, the overhead figure calculated in this process will be converted from an annual to an average monthly overhead expense per ship.

A second issue concerning the time frame of the data relates to TRANSCOM's expenses. During FY 93, there was no account for TRANSCOM, so MSC Headquarters will be the only rate-recoverable overhead expense in the initial stage one pool. This pool will be spread to all programs.

b. Overhead program salary

In stage one of the alternative allocation process, rate-recoverable overhead is allocated based on the percentage of salary dollars dedicated to each program. While the budget analyst acknowledges that "extrapolation" could be made, salary data is not currently compiled on people dedicated to a specific program. Therefore, the

current stage one allocation on the basis of percent of time will be used in the model calculations.

c. Output measurement

As described in Chapter V, each program has different output measurements. In this model NFAF, SMS and T-AH output is measured in days at sea. Cargo is measured as an average of MTONs and MTON miles because, while PAC moves shipments over longer distances, LANT moves more material. An average of the two measurements seems to balance out the effects of shipping farther versus heavier.

2. Results

The intent of this thesis is to provide an overhead allocation process that is meaningful. As discussed in Chapter IV, the current overhead allocation process is subject to several types of distortion, including price and quantity distortions. The alternative allocation process reduces these distortions by pushing cost center responsibility down to the area commands and by basing allocation of remaining overhead on the proportion of resources used per output produced. The alternative approach is intuitively a more accurate one, but since overhead historically has been assigned in a different manner, comparisons between the two results would be like comparing apples and oranges. Therefore, it would be extremely difficult to validate results of the alternative process against historical data because of the disparate approaches used.

C. CALCULATION PROCESS

1. Stage One Allocation - By Program

This stage will be allocated using a combination of the current method and the alternative method. As suggested in the alternative plan, only those costs incurred by COMSC and TRANSCOM will be included in the rate-recoverable overhead pool; all area command expenses will remain at the area level. See Figure 3 for details. This pool will allocated to programs in the current fashion of percent of time per program. The stage one allocation will result in a dollar overhead control figure to each program as described in Chapter III. The control figures for each program will be the input for the second stage of the alternative allocation process.

2. Stage Two Allocation - By Area

As described in Chapter V, program overhead control figures will be allocated to area commands based on the output for each program at each area command. See Figure 3 for the FY 93 calculation of MSCPAC's overhead pool using the alternative second stage allocation process. The output from this stage is the end of the alternative allocation process described in Chapter V and will be the input to the model.

3. Cost Simulation Model

Using this model at MSCPAC level assumes the responsibility of allocating geographical area's overhead pool to ship classes has been delegated to the area commanding officers. This same model could also be used by

Stage One Allocation (from FY94/95 Planning Budget exhibit IF-21.3)

FY 93 percent time per Program for all MSC	
Cargo	57.8%
SMS	11.6%
NFAF	24.9%
T-AH	1.6%

$ OH Program Pools PAC is involved with	
Cargo	$ 13,377,137.79
SMS	$ 2,684,685.09
NFAF	$ 5,762,815.41
T-AH	$ 370,301.39

FY 93 HQ actual general exp in nominal dollars $ 23,143,837.00

note: Only those programs pertaining to PAC have been included here.
If all were included, the total would be 100% and all HQ $ would be allocated.

Stage Two Allocation to PAC

ave mtons/mtonmiles*	26.99%	PAC Cargo	$ 3,610,510.08
PAC/MSC Sea Days	4.89%	PAC SMS	$ 131,200.25
PAC/MSC Sea Days	50.72%	PAC NFAF	$ 2,922,820.46
PAC/MSC Sea Days	43.75%	PAC T-AH	$ 162,006.86
		FY93 PAC ALLOC OF HQ	**$ 6,826,537.65**
		FY93 PAC CMD EXP	$ 41,325,179.27
		FY 93 $PAC OH POOL	**$ 48,151,716.92**

notes:

PAC CARGO FY 93 Calcs

PAC/MSC MTONS	2225/8783=	25.33%
PAC/MSC mtonmiles	9604/33525=	28.65%
ave mtons/mtonmiles*		26.99%

PAC T-AH FY 93 DAYS AT SEA
PAC/MSC 7/16= 43.75%

PAC NFAF FY 93 DAYS AT SEA
PAC/MSC 1588/3131 =0.5072

PAC SMS FY93 FOS Days
PAC/MSC 240/4911= 4.89%

Figure 3
Overhead Allocation Stages One & Two

Headquarters' budget analysts to allocate overhead to each ship class.

Overhead allocation for each class of ship will be calculated on Sheet 2 of the model, but will be invisible to the analyst using the software. See Figure 4 for calculation details. There are numerous ways area commands could spread their assigned pool of overhead to ships in their operating area. Recall that if MSC were operating completely under the alternative method of allocation, the PAC overhead pool would consist of all the costs accumulated by PAC shore activities plus a portion of COMSC's and TRANSCOM's costs based on program salaries. The sum of these costs would be distributed to specific ships under PAC's cognizance.

The method used in this thesis to allocate MSCPAC's share of overhead to ship classes will be very similar to the alternative stage two method of allocating program overhead to area commands. Area overhead will be allocated to specific ship classes and ultimately specific ships based on the proportion of days a class of NFAF ships is available to the days all NFAF ships are available in PAC. For example:

$$\frac{\dfrac{\text{T-AO 187 class ship days}}{\text{PAC NFAF days}} \times \$\text{PAC OH pool}}{\text{number of ships in T-AO 187 Class}} = \$OH_{SA}$$

where $\$OH_{SA}$ is dollars of overhead per ship per annum. To convert this to the default time assumption in the Cost Simulation Model, $\$OH_{SA}$ is simply divided by 12 to yield a monthly overhead cost, $\mathbf{\$OH_{SM}}$, for each ship in a class. The

OVERHEAD ALLOCATION TO SHIPS

(TAO 187 DAYS/PAC NFAF SHIP DAYS x $PAC OH POOL)
NUMBER OF SHIPS IN CLASS

[(161+193+190+125+102+39)/1588*48,151,716.92]
7

$24,561,014.30 = $3,508,716 =$ $OH_{SHIP\ ANNUAL}$

7 **$292,393** = $$OH_{SHIP\ MONTH}$$

FY 93 $PAC OH POOL **$48,151,716.92**

Ships in Class:

USNS Diehl	USNS Pecos
USNS Ericcson	USNS Tippecanoe
USNS Guadelupe	USNS Yukon
USNS Higgins	

(ATF 166 DAYS/PAC NFAF SHIP DAYS x $PAC OH POOL)
NUMBER OF SHIPS IN CLASS

[(124+154+118+116)/1588*48,151,716.92]
4

$15,524,986.82 = $3,881,246.70 =$ $OH_{SHIP\ ANNUAL}$

4 **$323,437.23** =$ $OH_{SHIP\ MONTH}$

Ships in Class:

USNS Catawba
USNS Narragansett
USNS Navajo
USNS Sioux

Figure 4
Overhead Allocation to Ships

monthly overhead cost is then inserted into the ship class time analysis sheet as shown in Figure 5. The "indirect overhead budgeted" feature would be updated annually with the overhead control figure assigned by MSC Headquarters.

D. CONCLUSIONS

As discussed in the assumptions for this chapter, mathematical validation of the "indirect overhead budgeted" portion of the Cost Simulation Model would be extremely difficult because the actual overhead expenses assigned to ships are based on the current, rather distorted system, and the estimates produced by this model are based on the proportion of resources used to produce output. However, some general conclusions can be made.

If the model produces perdiem rates consistently lower than actual rates, it could be construed that overhead has been underapplied that year. Alternately, if model rates were consistently higher than historical ones, it could be implied that overhead had been overapplied that year.

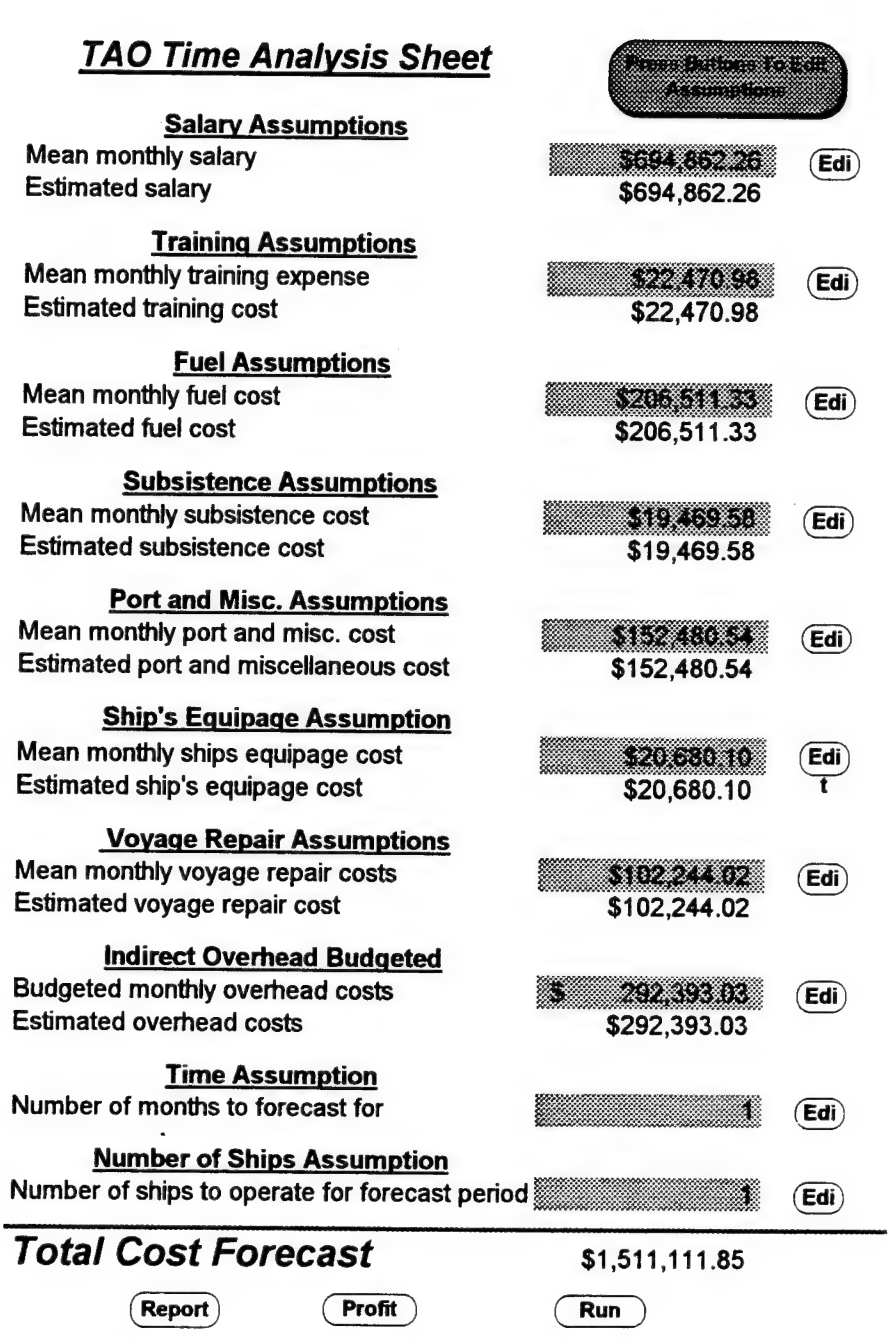

Figure 5
TAO-187 Class Time Analysis Worksheet

VII. CONCLUSIONS

The intent of this thesis was to examine the overhead expenses of the Military Sealift Command; to study the changes in those expenses between FY 88 and FY 94; to outline MSC's overhead allocation plan; to develop an alternative allocation plan; and finally to add a useful overhead feature to a previously developed cost simulation model for specific ships in MSC's inventory.

Without doubt, General Expenses are growing at MSC. The issue is that General Expenses are growing faster than direct expenses. While the direct costs of traffic operations have leveled out over the past couple of years, General Expenses keep rising, mainly in the areas of ADP and personnel. TRANSCOM expenses have placed an added burden on MSC's General Expenses.

MSC's current overhead allocation plan is relatively easy to implement but its highly aggregated nature and indirect method of allocation could lead to a great deal of distortion in the true cost of providing services. Hopefully, the alternative allocation plan suggested in this thesis reduces some of that information distortion by relating resources used to services produced (output). Also, simply delegating cost center responsibility to area commanders would probably enhance cost control.

One area of concern is a shortcoming of the FMIS accounting system. This expensive system that was to bring MSC's accounting into the computer age is only able to produce reports to the computer screen or to paper. There is no capability available to users to download FMIS data to floppy disks and conduct further analysis. All data used in

this thesis was entered into other spreadsheet programs by hand in order to manipulate it.

The cost simulation model is a qualified success. While a monthly overhead estimate for each ship was developed to put in the model, it is not really possible to say whether the predictions will be more accurate because the estimates were developed using a completely different allocation system than the one on which actual perdiem rates are calculated.

There are several areas with potential for future study. Working on the first step in the evolution toward Activity Based Costing would be an excellent challenge. MSC does not currently focus on this issue. MSC Headquarters is developing a dictionary of sorts that simply defines all of the General Expense accounts. Currently area commands are submitting definitions to Headquarters for accounts peculiar to their area command. That will be very useful to future thesis students. A second possible area for further study is the feasibility of separating production overhead costs from general and administrative costs. This would allow expenses that are incurred only by some programs to be allocated to those programs and not all programs, as is done currently. A third area for further study is the refinement of the cost simulation model. Adding the time value of money to the model would increase its usefulness in projecting perdiem rates in constant dollars.

APPENDIX A. OVERHEAD CATEGORIES AND ACCOUNTS

This Appendix provides a list of overhead account numbers and abbreviated account titles as of June 18, 1994 (revision 18). MSC is currently developing a dictionary of account definitions.

ACCOUNT	DESCRIPTION
SALARIES AND RELATED EXPENSES	
6111	BASE PAY CLASS
6112	BASE PAY UNCLASS
6113	BASE PAY FNDH
6114	BASE PAY FNIH
6121	OT CLAS
6124	BEN SUG CLAS
6125	PERF AWD CLAS
6127	CONT OF PAY CLAS
6131	OT UNCLAS
6135	PERF AWD UNCLAS
6136	CONT OF PAY UNCLAS
6160	OTHER PAY FNDH
6165	OTHER PAY FNIH
6171	ANN LV ERND CLASS
6173	SICK LV TKN CLASS
6174	MILL LV TKN CLASS
6175	OTHR LV TKN CLASS
6181	ANN LV ERND UNCL
6183	SICK LV TKN UNCL
6185	OTHR LV TKN UNCLAS
6201	CSRS RET CLAS
6202	FERS RET CLAS
6203	FERS FICA CLAS
6204	OTP FICA CLAS
6205	MED CSRS CLAS
6206	TSP FERS CLAS
6207	HLTH INS CLAS
6208	LIFE INS CLSA
6209	POST/QTRS ALLOW CLAS
6210	FICA CSRS
6221	CSRS RET UNCL
6222	FERS RET UNCL
6223	FERS FICA UNCL
6224	OTP FICA UNCL
6225	MED CSRS UNCL
6226	TSP FERS UNCL
6227	HLTH INS UNCL
6228	LIFE INS UNCL
6261	SEP ALLOW FNDH

6262	OTHER BEN FNDH
6266	SEP ALLOW FNIH
6267	OTHER BEN FNIH
6516	OFF EXP STAT POST

CHARTER AND RELATED EXPENSE

7530	OTHER CONT SVCS

TRAINING

6803	MGT TRG
6805	ADMIN TRG
6812	COMPUTER TRG
6813	EEO TRG
6821	MISC TRG
6823	TQL (TQM)
6824	CO-OP TRAINING
6861	MIL COMPUTER TRG
6863	MIL TQL
6899	MIL OTHER TRG

TRAVEL

6901	RECRUITMENT TVL
6902	TRAINING TVL
6903	PCS TVL
6904	CMD INSP TVL
6905	OPS TVL
6906	ADMIN TVL
6907	SCN TVL
6910	OTHER TVL

MISCELLANEOUS

6511	CONSUMABLES
6521	ADP SUPPL
6522	SOFTWARE EXP TO $15K
6523	ASHORE MED SUPP
6525	AUD VIS SUP
6527	NON ADP EQP
6529	NON SHIP ADP
6532	ELECTRONIC EQUPT
6533	AUD VIS EQP
6536	OFF EQP RENT SVC
6537	ADP EQP RENT SVC
6539	S EQ RENT SVC
6540	OFF EQPT M & R
6541	ADP EQPT M & R
6542	AUTO M & R
6543	OPER EQP M & R
6545	CONTAINER M & R
6546	AUD VIS EQ
6547	OTHER M & R
6550	PUB & SUPSCRIPT

6560	OTHER SUPPLIES
6570	OTHER MAINT
6582	EXPRESS MAIL
6584	METER SETTING
6589	POSTAGE STAMPS
7001	PRINT & REPRO
7002	PROF MGT SVC
7003	LAUNDRY
7005	PUBLIC AFFAIRS
7006	EEO
7007	SLUC
7008	RENT LEASE
7009	MAINT
7010	UTLITIES
7012	DATA COMMUNICATIONS
7013	VOICE COMMUNICATIONS
7014	INMARISAT
7015	ADP MOPEX
7016	ADP SERVICES
7017	AUTO EXP
7018	MEDICAL EXP
7019	R&D EXP
7020	COURIER SVC
7025	CDM IRL
7027	DFAS ACCT SVC
7028	TRANSCOM
7030	DSG DEV EXP ALT
7041	CFA BLDG DEP
7042	CFA PLANT EQ DEP
7044	CFA - SOFTWARE
7045	CFA - OTHER
7515	HAZ MAT DISPOSAL
7520	CLAIMS
7540	FECA
7550	MAJOR REAL PROP M&R
7560	FOR. CURRENCY LOSS/GA
7700	OTHER MISCEL EXP
7701	DISCOUNTS TAKEN
7702	REIMB PPA INTEREST

SPONSOR OT/SUBSISTENCE/OTHER

6531	REIMB SHIP EQPGE
7525	OTHER REIMB COSTS

7026	BASE OP SVC (BOS)

APPENDIX B. GENERAL EXPENSES FYS 1988 - 1994

This Appendix provides constant dollar General Expenses in MSC Financial Statement format and some basic calculations including Percent Change for each account group and the ratio of General Expenses to Direct Traffic Operations. Also included are Account Group/Category percentages.

1995 Constant Dollars	1988	1989	1990	1991	1992	1993	1994	% change 88-94
Salaries and Wages Expense								
Regular	30,443,971.89	32,436,267.21	35,763,152.00	41,888,112.30	43,907,477.38	54,765,811.44	55,764,693.64	83.17%
Overtime	1,853,620.51	2,205,166.54	2,417,645.34	2,222,670.41	2,391,037.08	2,400,900.22	2,080,387.54	12.23%
Annual, Sick & Military Leave	4,411,730.87	4,264,349.74	4,318,287.42	4,812,209.99	5,367,189.52	7,333,285.22	8,426,298.57	91.00%
Ashore Military Labor					13,528,086.29	14,045,942.95	23,261,431.43	71.95% 92-94
Foreign National Direct Labor & Benefits	1,160,288.91	1,259,583.64	1,505,413.26	1,376,213.36	1,660,444.16	1,279,207.77	1,276,544.24	10.02%
Employer Contributions	5,607,710.83	6,678,670.10	7,914,137.29	9,272,492.98	10,472,487.06	13,423,884.33	13,622,597.92	142.93%
Cash in Lieu of Quarters	1,445,452.89	1,410,858.83	1,253,665.65	1,469,267.83	1,848,183.48	2,107,730.25	2,600,858.50	79.92%
Awards	565,234.25	630,907.42	648,294.42	916,984.84	812,715.61	1,120,557.57	1,185,817.26	109.79%
Continuation of Pay		5,500.86	3,160.01	899.49	9,288.49	26,715.61	18,170.70	230.32% 89-94
Total Salaries & Wages	$45,488,010.15	$48,893,104.34	$53,823,775.39	$61,758,851.21	$79,998,909.06	$96,504,035.57	$108,236,599.80	137.95%
Overhead Expenses								
Travel	4,857,389.83	5,195,961.77	5,194,835.36	6,049,324.57	6,071,479.35	7,215,518.26	8,297,583.85	70.82%
Public Information	33,662.99	67,465.74	54,612.36	116,313.64	105,054.73	100,124.55	75,156.34	123.26%
Occupancy of Premises	3,262,845.52	4,042,563.12	3,328,199.88	4,191,396.57	4,765,913.08	4,249,058.46	5,466,987.74	68.17%
Office Equipment, Rental & Services	263,430.15	308,510.46	157,276.72	257,607.00	308,168.42	297,402.36	345,870.24	31.29%
Office Expenses, Stationery & Postage	1,198,396.34	1,228,425.10	1,198,598.50	1,577,891.22	1,267,195.19	669,162.97	1,142,766.69	-4.64%
ADP Equipment & Rental Service	9,891,284.43	1,537,963.45	6,885,849.80	6,532,836.83	7,848,630.11	13,432,910.07	15,220,152.29	53.87%
ADP Supplies	163,657.99	170,468.86	197,067.59	268,230.05	367,677.47	301,239.18	251,788.21	53.84%
ADP Software	53,401.35	322,337.10	131,636.05	464,759.25	848,349.41	881,918.82	736,777.29	1279.70%
Communications	2,908,174.76	2,480,336.62	2,465,951.47	4,233,826.35	4,321,892.27	4,975,984.75	4,115,384.51	41.51%
Automotive Equipment Expense	436,228.09	401,835.78	425,261.70	718,915.51	595,104.58	423,670.04	499,756.82	14.56%
Operational Equipment	5,289.18	2,387.59	4,604.27	18,105.22	17,324.16	23,623.60	513,604.48	9610.47%
Office Equipment Maintenance	3,080,411.87	3,827,909.35	2,549,106.87	3,526,302.50	5,078,405.12	10,868,704.88	9,873,252.07	220.52%
Expensed F.A. $5K-< $15K		0.00	0.00	0.00	173,788.68	0.00	0.00	
Medical Expenses, Civilian Personnel	96,717.58	110,811.49	107,119.58	80,065.76	161,743.80	249,643.23	190,797.80	97.27%
Design & Development Expense	6,047,995.74	1,769,105.55	1,949,173.89	10,439,693.00	8,475,880.57	2,996,951.66	4,449,167.66	-26.44%
Foreign National Indirect Labor	1,620,988.98	2,736,353.69	789,928.37	522,161.17	778,128.32	916,080.85	535,752.96	-66.95%
Major Real Property Maintenance & Repair	0.00	0.00	0.00	0.00	24,059.82	381,657.17	142,188.05	490.98% 92-94
Depreciation Contributed Fixed Asset	0.00	0.00	0.00	0.00	5,014,487.92	2,557,678.91	2,791,199.08	-44.34% 92-94
Base Operations Support	0.00	0.00	0.00	0.00	0.00	0.00	136,829.34	
DFAS Accounting Service	0.00	0.00	0.00	0.00	0.00	0.00	2,996,081.35	
TRANSCOM	0.00	0.00	0.00	0.00	0.00	0.00	17,673,206.28	
Other Overhead Expense	15,667,195.79	16,664,931.47	19,573,116.12	36,237,783.10	24,628,518.48	11,607,882.63	22,423,573.91	42.94%
Total Overhead Expense	$49,607,070.61	$40,887,367.16	$45,010,338.53	$75,239,413.73	$70,869,801.67	$61,949,190.42	$97,897,838.55	97.35%
Total General Expense	$95,095,080.76	$89,780,471.49	$98,834,113.92	$136,998,264.94	$150,868,710.73	$158,453,225.98	$206,134,438.35	116.77%
Direct Traffic Expense	$2,510,748,918	$2,424,670,197	$2,557,193,642	$5,287,871,866	$3,125,446,121	$2,422,865,869	$2,322,620,503	
Ratio General Expense/Direct Traffic Expense	3.79%	3.70%	3.86%	2.59%	4.82%	6.54%	8.88%	

Account Group/Category Calculations In 1995 dollars

	1988	1993	1994
S&W/Total General Exp	47.83%	60.90%	52.51%
Reg/S&W	66.93%	56.75%	51.52%
OT/S&W	4.07%	2.49%	1.92%
A,S&ML/S&W	9.70%	7.60%	7.79%
Ashore Mil/S&W	0.00%	14.55%	21.49%
FNDH/S&W	2.55%	1.33%	1.18%
EC/S&W	12.33%	13.91%	12.59%
CashQtr/S&W	3.18%	2.18%	2.40%
Awards/S&W	1.24%	1.16%	1.10%
Cont Pat/S&W	0.00%	0.03%	0.02%
Overhead/Total General	52.17%	39.10%	47.49%
Travel/OH	9.79%	11.65%	8.48%
Public Info/OH	0.07%	0.16%	0.08%
Occupancy/OH	6.58%	6.86%	5.60%
OER&S/OH	0.53%	0.48%	0.35%
OES&P/OH	2.42%	1.08%	1.17%
ADPE&RS/OH	19.94%	21.68%	15.55%
ADPSup/OH	0.33%	0.49%	0.26%
ADPSoftware/OH	0.11%	1.10%	0.75%
Comms/OH	5.86%	8.03%	4.20%
Auto/OH	0.88%	0.68%	0.51%
OperEq/OH	0.01%	0.04%	0.52%
OEM/OH	6.21%	17.54%	10.09%
ExpFA/OH	0.00%	0.00%	0.00%
Medical/OH	0.19%	0.40%	0.19%
D&DE/OH	12.19%	4.84%	4.54%
FNIH/OH	3.27%	1.48%	0.55%
MRP/OH	0.00%	0.62%	0.15%
Depreciation/OH	0.00%	4.13%	2.85%
BOS			0.14%
DFAS			3.06%
TRANSCOM			18.05%
Other/OH	31.62%	18.74%	22.91%

APPENDIX C. GENERAL EXPENSES BY AREA COMMAND FYS 1989-1994

This appendix provides detailed 1995 constant dollar General Expense data for each area command from FY 1989 through FY 1994. Detailed FY 88 data was unavailable at the time of writing. Also provided are percent change calculations for each account over the period.

ACTUAL OVERHEAD FY89 BY AREA COMMAND IN 1995 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$22,979,794.39	$4,837,151.45	$3,329,260.46	$18,150,040.88	$8,605.68	$49,304,852.85
REGULAR TIME CLASS	15,907,300.45	2,545,030.69	1,265,038.86	12,108,739.58	(268.81)	31,825,840.77
OVERTIME CLASSIFIED	1,072,697.40	171,197.43	45,441.65	887,613.09	0.00	2,176,949.57
ANNUAL/SICK & MIL LEAVE	1,777,643.51	281,307.47	68,301.69	2,024,636.91	2,435.48	4,154,325.06
AWARDS & BONUSES	420,402.76	27,138.00	16,645.02	160,598.82	6,122.95	630,907.54
CONTINUATION OF PAY	0.00	0.00	0.00	5,500.49	0.00	5,500.49
MILITARY LABOR ASHORE	0.00	0.00	0.00	0.00	0.00	0.00
REG TIME-UNCLASS	205,005.77	4,568.03	9,296.46	393,556.65	0.00	612,426.90
OVERTIME-UNCLASS	8,111.06	0.00	0.00	20,105.60	0.00	28,216.65
ANN, SICK & MIL LEAVE	53,328.78	0.00	0.00	56,695.62	0.00	110,024.39
FOR NATL DIR LABOR	36,146.03	149,290.89	753,714.87	0.00	0.00	939,151.79
FOR NATL DIR LABOR BEN	5,220.76	78,892.64	236,318.32	0.00	0.00	320,431.72
FOR NATL INDIRECT LAB	0.00	1,107,602.55	714,804.98	0.00	0.00	1,822,407.53
TOTAL SAL & WAGES	$19,485,856.51	$4,365,027.69	$3,109,561.84	$15,657,446.75	$8,289.62	$42,626,182.41
RELATED EXPENSES						
EMPLR HLTH BEN CONT ASH	868,036.28	118,232.06	45,117.23	618,576.78	0.00	1,649,962.36
EMPLR RETIRE CONT CIV	690,005.19	136,347.49	49,939.84	663,330.33	0.00	1,539,622.85
EMPLR FED RET SYS ASHORE	941,172.19	85,116.34	55,083.14	521,217.06	0.00	1,602,588.72
EMPLR RETIRE CONT FERS	178,348.75	14,489.57	10,977.06	86,047.75	(433.50)	289,429.62
EMPLR LIFE INS CONT ASH	36,637.09	5,863.51	1,659.23	27,668.52	0.00	71,828.35
EMPLR SOC SEC CIV ASH	32,108.69	2,231.59	0.00	42,437.33	0.00	76,777.61
EMPLR MED CIV ASH CSRS	143,376.39	35,753.20	12,639.64	130,429.99	0.00	322,199.22
EMPLR FICA CIV ASH FERS	581,394.09	69,791.22	44,282.48	376,363.69	0.00	1,071,831.47
EMPLR FICA CIV ASH CSRS	22,859.20	4,298.79	0.00	26,522.68	749.57	54,430.24
TOTAL REL EXP	$3,493,937.88	$472,123.76	$219,698.62	$2,492,594.12	$316.07	$6,678,670.44
INDOCT & TRAINING	275,783.21	8,987.44	19,955.13	477,328.67	19,262.00	795,960.04
DESIGN/DEVEL & EXPER	0.00	0.00	0.00	626,806.30	2,109,546.87	2,736,353.17
TRAVEL	2,885,533.84	412,276.40	474,208.40	1,262,794.55	161,148.24	5,195,961.45
PUBLIC INFORMATION	37,195.29	654.71	3,044.45	26,571.70	0.00	67,466.15
OTHER GENERAL EXPENSES						
OCCUPANCY OF PREMISES	1,839,403.43	294,584.95	206,635.57	1,701,939.42	0.00	4,042,563.37
OFFICE EQUIP RENTAL	57,954.16	11,878.50	44,268.23	194,408.97	0.00	308,509.86
OFFICE EXP STATIONARY	474,589.46	123,662.20	48,412.19	575,824.50	5,936.80	1,228,425.15
ADP EQUIP RENTAL & SVC	196,651.84	628.31	68,846.68	906,677.60	365,159.57	1,537,964.01
ADP SUPPLIES	77,290.43	12,758.75	5,478.31	74,941.64	0.00	170,469.14
ADP SOFTWARE	82,896.13	18,111.02	15,229.98	206,099.60	0.00	322,336.74
COMMUNICATIONS	1,029,876.29	376,283.54	363,621.71	718,571.82	(8,016.58)	2,480,336.79
AUTO EQUIP EXPENSE	116,256.05	103,618.17	15,423.07	166,538.80	0.00	401,836.08
OPERATIONAL EQUIP EXP	1,697.52	689.52	0.00	0.00	0.00	2,387.04
OFFICE QUIP & MAINT	1,487,095.64	647,708.94	131,546.60	1,542,122.73	19,435.65	3,827,909.56
MED EXP-CIV PERSONNEL	79,879.09	18,693.98	0.00	12,238.90	0.00	110,811.97
MAJOR REAL PROP M&R	NA	NA	NA	NA	NA	NA
CASH IN LIEU OF QUAR	0.00	898,022.42	486,859.06	0.00	0.00	1,410,659.34
DEPRECIATION CONT F/A	6,318.83	409.43	0.00	0.00	0.00	6,728.25
DEPRECIATION	183,678.77	38,978.30	51,587.68	137,054.27	2,021,811.87	2,433,110.88
BASE OPERATING SUPPORT	NA	NA	NA	NA	NA	NA
DFAS ACCOUNTING	NA	NA	NA	NA	NA	NA
TRANSCOM	NA	NA	NA	NA	NA	NA
OTHER OVERHEAD EXPENSES	14,162,166.11	117,374.12	13,565.89	179,303.50	(1,043,277.05)	13,429,132.57
TOTAL OTHER GEN EXP	19,795,753.74	2,663,402.15	1,451,474.98	6,415,721.76	1,361,050.25	31,687,402.89
TOTAL GENERAL EXPENSES	$43,051,243.34	$7,509,453.03	$4,800,602.57	$25,043,003.30	$1,388,829.93	$89,787,996.54

ACTUAL OVERHEAD FY90 BY AREA COMMAND IN 1995 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$24,065,717.66	$4,556,632.64	$2,689,091.09	$18,481,786.26	$3,575,548.17	$53,368,244.65
REGULAR TIME CLASS	16,548,769.81	2,479,175.99	1,103,514.94	12,282,844.88	2,623,940.17	35,038,245.79
OVERTIME CLASSIFIED	1,271,628.36	154,459.67	6,689.97	919,645.88	44,090.07	2,396,513.94
ANNUAL/SICK & MIL LEAVE	1,715,309.74	260,783.20	158,387.33	1,826,240.30	266,360.94	4,227,081.51
AWARDS & BONUSES	339,690.64	37,130.52	13,580.06	175,330.10	82,563.62	648,294.93
CONTINUATION OF PAY	0.00	0.00	0.00	3,179.44	0.00	3,179.44
ASHORE MILITARY LABOR	0.00	0.00	0.00	0.00	0.00	0.00
REG TIME-UNCLASS	195,327.48	8,924.31	3,804.65	516,849.80	0.00	724,906.23
OVERTIME-UNCLASS	15,661.34	0.00	0.00	5,469.92	0.00	21,131.25
ANN, SICK & MIL LEAVE	29,859.49	0.00	0.00	61,346.29	0.00	91,205.78
FOR NATL DIR LABOR	39,214.85	156,777.83	880,851.10	0.00	0.00	1,076,843.78
FOR NATL DIR LABOR BEN	5,470.59	105,443.67	317,655.10	0.00	0.00	428,569.37
FOR NATL INDIRECT LAB	0.00	838,196.43	(40,061.31)	0.00	0.00	798,135.12
TOTAL SAL & WAGES	$20,160,932.29	$4,040,891.61	$2,444,421.84	$15,790,906.60	$3,016,954.80	$45,454,107.13
RELATED EXPENSES						
EMPLR HLTH BEN CONT ASH	985,119.89	133,872.45	50,566.59	701,226.70	139,357.70	2,010,143.33
EMPLR RETIRE CONT CIV	661,743.91	123,709.58	52,876.84	615,392.75	112,621.43	1,566,344.51
EMPLR FED RET SYS ASHORE	1,097,062.08	101,424.57	60,646.67	618,877.98	145,922.72	2,023,402.86
EMPLR RETIRE CONT FERS	236,081.03	22,188.09	17,147.63	125,772.68	35,478.39	436,667.83
EMPLR LIFE INS CONT ASH	40,351.26	5,999.15	2,476.75	30,330.22	5,996.56	85,153.93
EMPLR SOC SEC CIV ASH	45,245.69	1,756.43	0.00	37,348.33	0.00	84,350.46
EMPLR MED CIV ASH CSRS	141,428.67	32,413.12	12,147.69	129,259.88	24,064.29	339,313.65
EMPLR FICA CIV ASH FERS	676,322.46	86,839.04	48,807.09	404,993.88	95,152.28	1,312,114.74
EMPLR FICA CIV ASH CSRS	21,430.38	7,538.59	0.00	27,677.24	0.00	56,646.21
TOTAL REL EXP	$3,904,785.37	$515,741.03	$244,669.25	$2,690,879.66	$558,593.37	$7,914,137.52
INDOCT & TRAINING	337,148.61	22,002.50	6,982.38	292,861.55	9,384.75	668,379.78
DESIGN/DEVEL & EXPER	0.00	0.00	0.00	482,912.22	1,466,261.77	1,949,173.99
TRAVEL	2,761,281.05	506,789.39	476,568.76	1,139,137.23	311,058.84	5,194,835.27
PUBLIC INFORMATION	30,637.62	789.44	768.13	22,416.74	0.00	54,611.94
OTHER GENERAL EXPENSES						
OCCUPANCY OF PREMISES	1,860,545.28	384,224.83	111,750.33	971,679.20	0.00	3,328,199.64
OFFICE EQUIP RENTAL	57,334.79	21,415.23	26,250.84	52,276.26	0.00	157,277.11
OFFICE EXP STATIONARY	502,578.95	158,015.23	47,887.12	488,055.46	61.58	1,196,598.34
ADP EQUIP RENTAL & SVC	1,985,794.37	25,137.65	79,327.88	4,684,420.06	111,169.56	6,885,849.52
ADP SUPPLIES	67,277.75	66,074.63	7,231.84	56,483.74	0.00	197,067.96
ADP SOFTWARE	22,516.41	58,012.02	7,954.72	43,152.73	0.00	131,635.88
COMMUNICATIONS	996,394.84	547,431.44	415,055.32	507,070.32	0.00	2,465,951.91
AUTO EQUIP EXPENSE	122,124.45	107,627.60	19,200.75	176,309.38	0.00	425,262.18
OPERATIONAL EQUIP EXP	3,341.87	1,262.08	0.00	0.00	0.00	4,603.95
OFFICE QUIP & MAINT	1,106,613.39	817,481.16	57,918.78	567,093.73	0.00	2,549,107.05
MED EXP-CIV PERSONNEL	76,234.14	16,278.12	0.00	14,607.72	0.00	107,119.98
CASH IN LIEU OF QUAR	0.00	766,127.46	474,646.81	0.00	0.00	1,240,774.27
DEPRECIATION CONT F/A	0.00	0.00	0.00	0.00	0.00	0.00
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00
OTHER OVERHEAD EXPENSES	13,746,986.15	75,298.67	6,052.52	4,231,108.94	845,290.19	18,904,736.48
TOTAL OTHER GEN EXP	20,547,742.38	3,044,386.11	1,253,276.90	11,792,257.54	956,521.33	37,594,184.26
TOTAL GENERAL EXPENSES	$47,742,527.32	$8,130,600.08	$4,426,687.27	$32,211,371.54	$6,318,774.86	$98,829,429.90

ACTUAL OVERHEAD FY91 BY AREA COMMAND IN 1995 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$25,303,111.52	$3,446,087.11	$2,377,272.50	$20,611,085.08	$9,078,116.10	$60,815,672.31
REGULAR TIME CLASS	17,396,165.70	1,880,600.09	1,118,070.28	13,935,844.17	6,566,380.56	40,897,060.80
OVERTIME CLASSIFIED	1,049,194.98	84,247.03	51,530.92	847,474.67	169,789.21	2,202,236.80
ANNUAL/SICK & MIL LEAVE	2,124,406.56	128,680.38	36,306.03	1,834,046.36	631,683.50	4,755,122.83
AWARDS & BONUSES	300,946.66	23,764.18	39,910.16	282,861.24	269,502.53	916,984.76
CONTINUATION OF PAY	0.00	0.00	0.00	899.72	0.00	899.72
ASHORE MILITARY LABOR	0.00	0.00	0.00	0.00	0.00	0.00
REG TIME-UNCLASS	206,969.03	5,373.55	5,186.00	573,522.66	0.00	791,051.24
OVERTIME-UNCLASS	12,988.71	0.00	0.00	7,444.62	0.00	20,433.33
ANN, SICK & MIL LEAVE	19,846.67	0.00	0.00	37,240.47	0.00	57,087.14
FOR NATL DIR LABOR	39,532.85	60,405.08	953,932.63	10,255.67	0.00	1,064,126.22
FOR NATL DIR LABOR BEN	5,867.75	73,920.49	215,766.29	15,830.95	701.85	312,087.33
FOR NATL INDIRECT LAB	0.00	803,125.12	(277,035.58)	0.00	0.00	526,089.55
TOTAL SAL & WAGES	$21,155,918.91	$3,060,115.92	$2,143,666.73	$17,545,420.51	$7,638,057.65	$51,543,179.72
RELATED EXPENSES						
EMPLR HLTH BEN CONT ASH	1,053,142.38	98,062.63	46,506.79	636,815.38	315,097.42	2,149,624.60
EMPLR RETIRE CONT CIV	689,992.11	80,923.36	50,899.70	697,732.41	275,316.35	1,794,863.92
EMPLR FED RET SYS ASHORE	1,152,914.53	82,899.23	53,123.23	770,505.90	413,968.25	2,473,411.14
EMPLR RETIRE CONT FERS	280,378.34	19,193.99	17,242.80	186,352.17	97,530.79	600,698.09
EMPLR LIFE INS CONT ASH		4,202.32	3,210.92	30,043.67	14,453.66	95,418.66
EMPLR SOC SEC CIV ASH	43,508.10	1,581.28	0.00	29,973.99	0.00	58,843.14
EMPLR MED CIV ASH CSRS	266,808.27	35,334.15	18,596.13	156,604.58	96,429.16	573,772.29
EMPLR FICA CIV ASH FERS	614,053.41	61,629.56	44,026.21	535,313.68	227,262.82	1,482,285.67
EMPLR FICA CIV ASH CSRS	19,107.61	2,144.67	0.00	22,322.78	0.00	43,575.07
TOTAL REL EXP	$4,147,192.61	$385,971.18	$233,605.77	$3,065,664.57	$1,440,058.45	$9,272,492.59
INDOCT & TRAINING	401,014.52	6,838.26	13,616.18	336,557.96	91,341.95	849,368.88
DESIGN/DEVEL & EXPER	382,110.27	0.00	0.00	670,000.26	9,387,782.55	10,439,893.07
TRAVEL	2,795,073.02	686,513.16	414,699.43	1,503,988.33	649,051.05	6,049,324.99
PUBLIC INFORMATION	68,181.11	571.92	1,062.42	37,144.13	11,353.52	118,313.10
OTHER GENERAL EXPENSES						
OCCUPANCY OF PREMISES	1,774,980.19	1,195,760.80	78,214.62	1,099,716.87	42,723.99	4,191,396.48
OFFICE EQUIP RENTAL	59,319.92	26,760.52	26,835.15	79,290.86	65,400.90	257,607.36
OFFICE EXP STATIONARY	647,688.27	135,948.86	48,273.64	472,271.18	273,709.18	1,577,891.14
ADP EQUIP RENTAL & SVC	1,415,160.00	127,281.21	60,987.28	2,263,883.25	2,665,527.20	6,532,838.93
ADP SUPPLIES	74,631.84	68,925.09	6,031.70	97,934.86	20,706.75	268,230.25
ADP SOFTWARE	29,860.68	42,584.54	27,180.29	315,526.75	49,606.72	464,758.98
COMMUNICATIONS	1,404,226.17	1,100,921.66	539,521.72	772,010.11	417,146.59	4,233,826.25
AUTO EQUIP EXPENSE	223,932.94	181,503.12	25,815.94	287,600.46	62.92	718,915.37
OPERATIONAL EQUIP EXP	14,694.68	1,312.82	0.00	2,097.30	0.00	18,104.80
OFFICE QUIP & MAINT	1,309,558.20	25,931.42	311,776.04	1,701,803.53	179,233.16	3,528,302.35
MED EXP-CIV PERSONNEL	71,735.05	8,081.58	0.00	249.60	0.00	80,066.23
CASH IN LIEU OF QUAR	0.00	866,963.33	582,895.93	8,436.51	0.00	1,458,295.78
DEPRECIATION CONT F/A	0.00	0.00	0.00	0.00	0.00	0.00
DEPRECIATION	0.00	0.00	0.00	0.00	0.00	0.00
OTHER OVERHEAD EXPENSES	23,410,711.71	124,378.07	114,477.89	5,096,716.75	6,642,129.86	35,388,414.28
TOTAL OTHER GEN EXP	30,436,499.67	3,906,353.01	1,822,010.21	12,197,538.04	10,356,247.27	58,718,648.19
TOTAL GENERAL EXPENSES	$59,385,990.10	$8,046,363.47	$4,628,660.74	$35,356,313.79	$29,573,892.44	$136,991,220.54

ACTUAL OVERHEAD EXPENSES FY92 BY AREA CMD - 1995 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$30,720,378.27	$6,537,543.62	$5,441,655.03	$25,819,552.52	$10,403,613.86	$78,922,743.30
REGULAR TIME CLASS	18,138,586.76	2,004,156.24	1,017,797.89	14,447,476.11	7,540,910.28	43,148,927.29
OVERTIME CLASSIFIED	1,182,991.08	143,843.67	31,728.45	893,005.76	106,304.86	2,357,873.82
ANNUAL/SICK & MIL LEAVE	2,349,957.17	30,232.58	122,955.11	1,927,388.29	859,145.12	5,289,678.27
AWARDS & BONUSES	341,492.41	29,298.19	28,406.64	282,490.04	131,028.46	812,715.74
CONTINUATION OF PAY	8,713.50	0.00	0.00	763.87	(188.66)	9,288.71
ASHORE MILITARY LABOR	3,846,731.82	3,142,642.48	2,544,810.52	3,993,900.85	0.00	13,528,085.67
REG TIME-UNCLASS	162,224.84	1,179.82	5,669.47	589,476.10	0.00	758,550.23
OVERTIME-UNCLASS	21,505.23	0.00	0.00	11,657.63	0.00	33,162.86
ANN, SICK & MIL LEAVE	22,449.02	0.00	0.00	55,062.00	0.00	77,511.02
FOR NATL DIR LABOR	41,372.90	125,785.69	1,043,523.82	93,775.77	0.00	1,304,458.18
FOR NATL DIR LABOR BEN	5,184.17	32,482.32	316,257.01	2,062.79	0.00	355,986.29
FOR NATL INDIRECT LAB	0.00	646,838.46	126,161.07	0.00	1,018.76	774,018.29
TOTAL SAL & WAGES	$26,121,208.90	$6,156,459.46	$5,237,309.98	$22,297,059.20	$8,638,218.82	$68,450,256.37
RELATED EXPENSES						
EMPLR HLTH BEN CONT ASH	1,133,638.94	104,248.97	50,518.97	937,445.95	378,850.88	2,604,703.71
EMPLR RETIRE CONT CIV	702,150.63	80,669.08	50,965.98	631,174.60	281,397.29	1,746,357.58
EMPLR FED RET SYS ASHORE	1,313,377.65	101,007.35	50,834.77	920,900.52	538,442.79	2,924,563.08
EMPLR RETIRE CONT FERS	353,546.03	28,874.08	14,722.19	239,051.75	145,289.04	781,483.09
EMPLR LIFE INS CONT ASH	45,160.32	4,506.57	2,526.98	36,078.65	16,910.28	105,182.81
EMPLR SOC SEC CIV ASH	0.00	1,025.44	0.00	41,002.47	0.00	42,027.91
EMPLR MED CIV ASH CSRS	323,043.51	22,203.12	12,603.45	297,816.35	115,830.78	771,497.21
EMPLR FICA CIV ASH FERS	726,630.22	37,061.09	22,172.71	402,645.86	288,673.98	1,477,183.86
EMPLR FICA CIV ASH CSRS	1,622.07	1,488.46	0.00	16,377.17	0.00	19,487.70
TOTAL REL EXP	$4,599,169.36	$381,084.16	$204,345.05	$3,522,493.32	$1,765,395.04	$10,472,486.93
INDOCT & TRAINING	454,047.09	11,212.95	18,410.12	256,875.00	127,384.85	867,930.01
DESIGN/DEVEL & EXPER	375,117.68	0.00	0.00	1,256,563.05	6,844,200.25	8,475,880.98
TRAVEL	2,536,248.76	547,362.57	505,359.11	1,932,564.95	549,944.12	6,071,479.51
PUBLIC INFORMATION	44,551.20	1,641.43	(129.93)	55,594.08	3,397.43	105,054.21
OTHER GENERAL EXPENSES						
OCCUPANCY OF PREMISES	1,879,674.21	1,157,887.96	148,245.43	1,127,946.19	452,159.66	4,765,913.45
OFFICE EQUIP RENTAL	29,220.04	26,805.92	32,007.25	137,877.06	82,258.59	308,168.85
OFFICE EXP STATIONARY	419,909.19	157,319.10	54,340.61	395,717.25	239,909.43	1,267,195.58
ADP EQUIP RENTAL & SVC	1,339,435.55	321,950.51	90,615.96	3,243,276.14	2,853,352.12	7,848,630.28
ADP SUPPLIES	93,436.01	35,800.75	10,004.78	162,604.68	85,830.95	387,677.18
ADP SOFTWARE	27,917.06	18,906.44	16,200.92	395,824.48	189,500.04	648,348.94
COMMUNICATIONS	1,296,097.78	1,016,693.23	549,402.34	924,155.64	535,543.51	4,321,892.50
AUTO EQUIP EXPENSE	184,519.91	131,803.12	53,535.27	225,245.77	0.00	595,104.06
OPERATIONAL EQUIP EXP	14,298.26	3,025.72	0.00	0.00	0.00	17,323.97
OFFICE QUIP & MAINT	1,171,851.04	217,642.58	235,542.22	1,706,854.11	1,744,515.32	5,076,405.28
EXPENSED F.A. $5K-<$15K	0.00	0.00	14,451.07	155,002.31	4,335.10	173,788.48
MAJOR REAL PROP M&R	0.00	0.00	0.00	0.00	24,059.82	24,059.82
MED EXP-CIV PERSONNEL	76,875.19	34,877.47	0.00	49,990.72	0.00	161,743.38
CASH IN LIEU OF QUAR	0.00	1,042,019.87	492,706.17	323,272.69	0.00	1,857,998.72
DEPRECIATION CONT F/A	0.00	0.00	0.00	336,975.64	4,677,512.32	5,014,487.96
DEPRECIATION	95,299.66	0.00	0.00	0.00	0.00	95,299.66
OTHER OVERHEAD EXPENSES	17,362,080.23	106,708.41	(228,972.20)	4,384,986.96	2,040,485.17	23,665,288.58
TOTAL OTHER GEN EXP	23,990,614.12	4,271,441.06	1,468,079.82	13,569,729.64	12,929,462.06	56,229,326.70
TOTAL GENERAL EXPENSES	$58,120,957.11	$11,369,201.64	$7,433,374.15	$42,890,879.24	$30,858,002.57	$150,672,414.71

ACTUAL OVERHEAD FY03 BY AREA COMMAND - CONSTANT 1996 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	CTA	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$30,881,259.73	$5,983,521.69	$5,170,598.26	$28,561,608.04	$11,859,554.56	$14,640,983.65	$95,297,505.93
REGULAR TIME CLASS	18,290,134.56	1,905,874.57	1,097,030.04	14,427,271.87	7,872,006.77	10,716,076.54	$54,308,394.35
OVERTIME CLASSIFIED	960,156.40	89,006.55	30,861.88	949,474.54	104,766.19	248,915.75	$2,383,181.32
ANNUAL/SICK & MIL LEAVE	2,537,923.24	15,442.86	242,108.03	2,298,132.00	817,383.56	1,345,148.84	$7,256,138.55
AWARDS & BONUSES	458,336.77	36,834.18	19,622.05	285,733.01	133,593.60	186,437.55	$1,120,557.16
CONTINUATION OF PAY	0.00	0.00	0.00	26,716.13	0.00	0.00	$26,716.13
ASHORE MILITARY LABOR	3,666,119.43	2,703,878.51	2,223,476.30	4,447,963.90	1,004,504.61	0.00	$14,045,942.78
REG TIME-UNCLASS	104,893.05	0.00	6,414.97	346,109.55	0.00	0.00	$457,417.58
OVERTIME-UNCLASS	12,127.75	0.00	0.00	5,591.30	0.00	0.00	$17,719.05
ANN, SICK & MIL LEAVE	16,388.98	0.00	0.00	60,757.95	0.00	0.00	$77,146.91
FOR NATL DIR LABOR	39,277.54	152,647.10	788,769.61	23,907.82	0.00	0.00	$1,002,602.07
FOR NATL DIR LABOR BEN	5,352.32	41,622.45	204,316.07	25,367.10	0.00	0.00	$276,657.94
FOR NATL INDIRECT LAB	0.00	597,878.05	303,269.27	0.00	0.00	0.00	$901,147.32
TOTAL SAL & WAGES	$26,090,710.03	$5,543,184.28	$4,913,868.22	$22,897,025.16	$9,932,254.76	$12,496,578.68	$81,873,621.13
RELATED EXPENSES							
EMPLR HLTH BEN CONT ASH	1,195,106.87	110,854.98	55,189.16	915,902.37	412,356.89	553,731.86	$3,243,142.12
EMPLR RETIRE CONT CIV	695,224.60	76,221.25	42,655.72	653,283.51	299,537.29	479,463.45	$2,246,385.82
EMPLR FED RET SYS ASHORE	1,376,998.29	117,620.11	73,424.52	978,784.44	587,113.90	625,798.13	$3,759,739.39
EMPLR RETIRE CONT FERS	412,581.29	36,125.42	21,759.29	259,542.49	175,025.28	179,524.44	$1,084,558.21
EMPLR LIFE INS CONT ASH	41,241.41	4,242.35	2,392.06	34,934.63	16,253.63	21,875.13	$120,939.21
EMPLR SOC SEC CIV ASH	731.07	1,139.91	0.00	23,274.58	0.00	0.00	$25,145.56
EMPLR MED CIV ASH CSRS	327,025.87	31,218.52	17,337.50	270,120.93	133,004.93	177,857.14	$956,364.90
EMPLR FICA CIV ASH FERS	741,640.31	60,449.08	43,971.79	525,075.79	303,166.85	306,334.81	$1,980,638.63
EMPLR FICA CIV ASH CSRS	0.00	2,465.78	0.00	3,664.14	841.03	0.00	$6,990.96
TOTAL REL EXP	$4,790,549.70	$440,337.41	$256,730.04	$3,664,582.88	$1,927,299.80	$2,344,384.97	$13,423,884.80
INDOCT & TRAINING	$446,073.36	$19,745.99	$33,423.55	$327,871.55	$114,230.83	$126,035.66	$1,067,380.94
DESIGN/DEVEL & EXPER	278,478.29	0.00	0.00	(137,403.96)	2,628,166.25	227,709.52	$2,996,952.10
TRAVEL	2,761,916.65	476,190.43	591,673.70	2,366,293.52	558,183.26	461,258.66	$7,215,516.21
PUBLIC INFORMATION	53,860.23	1,185.51	10.00	32,405.37	74.73	12,568.66	$100,124.52
OTHER GENERAL EXPENSES							
OCCUPANCY OF PREMISES	$1,895,495.73	($103,091.79)	$124,229.20	$1,248,720.36	$33,642.74	$1,050,062.13	$4,249,058.36
OFFICE EQUIP RENTAL	52,993.56	27,125.74	28,342.59	106,804.90	(7,533.43)	89,868.75	297,402.11
OFFICE EXP STATIONARY	159,147.84	40,371.50	23,555.84	248,851.91	25,639.77	171,596.60	669,163.26
ADP EQUIP RENTAL & SVC	2,746,833.43	258,518.10	124,022.38	3,669,278.33	3,177,412.01	3,456,845.96	13,432,910.21
ADP SUPPLIES	37,508.19	4,626.37	13,543.66	146,636.18	75,131.00	23,796.28	301,239.68
ADP SOFTWARE	55,570.66	57,597.44	27,624.89	560,327.15	(50,847.18)	31,643.97	681,916.92
COMMUNICATIONS	1,282,189.29	678,501.61	482,321.03	717,308.28	75,543.76	1,740,101.21	4,975,965.18
AUTO EQUIP EXPENSE	179,286.74	60,364.25	25,704.95	158,314.08	0.00	0.00	423,670.02
OPERATIONAL EQUIP EXP	14,475.10	9,116.90	0.00	31.67	0.00	0.00	23,623.66
OFFICE EQUIP & MAINT	8,639,632.05	328,325.52	185,090.98	696,360.84	253,933.44	369,630.19	10,872,973.01
MED EXP-CIV PERSONNEL	137,333.25	42,004.20	0.00	68,657.41	776.96	871.26	249,643.08
MAJOR REAL PROP M&R	49,414.46	0.00	0.00	336,499.89	(24,941.98)	20,684.66	381,657.04
CASH IN LIEU OF QUAR	0.00	1,187,801.30	512,262.84	442,594.86	0.00	0.00	2,142,658.99
DEPRECIATION CONT F/A	91,667.99	0.00	98,171.18	264,629.39	2,101,964.06	1,046.45	2,557,679.05
BASE OPERATING SUPPORT	0.00	0.00	0.00	0.00	50,649.23	0.00	50,649.23
DFAS ACCOUNTING	62,280.98	0.00	0.00	0.00	0.00	0.00	62,280.98
TRANSCOM	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER OVERHEAD EXPENSES	4,485,656.78	112,981.57	(353,163.17)	5,109,617.07	(489,956.72)	1,558,188.25	10,423,303.77
TOTAL OTHER GEN EXP	20,089,483.82	2,704,242.72	1,291,706.32	13,974,632.31	5,221,413.66	8,514,315.72	51,795,794.54
TOTAL GENERAL EXPENSES	$54,511,094.08	$9,184,886.33	$7,087,411.82	$43,125,406.84	$20,381,625.29	$24,182,851.86	$158,473,276.24

ACTUAL OVERHEAD FY94 BY AREA COMMAND - CONSTANT 1995 DOLLARS

GENERAL EXPENSES	LANT	FE	EUR	PAC	CTA	MSC HQ	CONSOL MSC
SALARIES & WAGES & REL EXP	$31,298,502.51	$5,714,547.43	$5,062,709.42	$25,872,128.21	$13,260,390.36	$24,963,416.32	$106,171,694.26
REGULAR TIME CLASS	18,718,627.23	2,232,603.97	1,084,808.09	13,918,982.53	8,935,133.61	10,477,276.51	55,367,431.95
OVERTIME CLASSIFIED	806,058.54	97,139.99	41,457.25	761,427.22	132,684.18	233,055.08	2,071,822.26
ANNUAL/SICK & MIL LEAVE	2,845,516.54	21,859.35	244,388.42	2,967,178.30	1,017,511.56	1,241,924.47	8,338,378.64
AWARDS & BONUSES	467,325.07	33,759.68	22,075.01	246,602.20	194,156.16	221,899.14	1,185,817.26
CONTINUATION OF PAY	5,883.72	0.00	0.00	12,286.98	0.00	0.00	18,170.70
ASHORE MILITARY LABOR	3,323,158.32	2,444,342.69	2,124,236.87	3,975,986.98	885,159.55	10,508,547.01	23,261,431.43
REG TIME-UNCLASS	146,374.64	0.00	5,396.71	245,490.34	0.00	0.00	397,261.69
OVERTIME-UNCLASS	6,729.64	0.00	0.00	1,835.64	0.00	0.00	8,565.28
ANN, SICK & MIL LEAVE	21,966.91	0.00	0.00	65,953.03	0.00	0.00	87,919.93
FOR NATL DIR LABOR	40,485.53	108,633.49	849,997.30	0.00	0.00	0.00	999,116.32
FOR NATL DIR LABOR BEN	5,416.58	26,737.40	245,273.94	0.00	0.00	0.00	277,427.92
FOR NATL INDIRECT LAB	0.00	372,610.19	163,142.76	0.00	0.00	0.00	535,752.96
TOTAL SAL & WAGES	$26,387,542.73	$5,337,686.77	$4,780,776.36	$22,195,743.21	$11,164,645.06	$22,682,702.21	$92,549,096.34
RELATED EXPENSES							
EMPLR HLTH BEN CONT ASH	1,227,999.17	108,441.37	57,710.41	929,302.69	433,651.15	548,834.19	3,305,938.98
EMPLR RETIRE CONT CIV	700,231.14	71,265.41	37,808.33	639,191.48	307,437.17	471,332.86	2,227,266.38
EMPLR FED RET SYS ASHORE	1,407,521.77	127,884.75	85,414.91	981,704.05	681,255.96	615,204.35	3,898,985.79
EMPLR RETIRE CONT FERS	443,567.80	43,934.79	31,776.78	288,026.50	199,006.09	194,369.31	1,200,681.29
EMPLR LIFE INS CONT ASH	42,292.76	4,256.20	2,275.86	41,295.70	17,498.37	21,239.97	128,858.86
EMPLR SOC SEC CIV ASH	669.81	1,356.02	0.00	25,252.49	0.00	0.00	27,278.32
EMPLR MED CIV ASH CSRS	329,423.79	(49,355.03)	18,761.40	255,370.62	160,617.03	186,993.92	901,811.72
EMPLR FICA CIV ASH FERS	759,253.54	65,576.87	48,185.38	513,414.00	296,279.53	242,739.51	1,925,448.82
EMPLR FICA CIV ASH CSRS	0.00	3,500.29	0.00	2,827.48	0.00	0.00	6,327.76
TOTAL REL EXP	$4,910,959.78	$376,860.66	$281,933.06	$3,676,385.00	$2,095,745.30	$2,280,714.12	$13,622,597.92
INDOCT & TRAINING	424,000.90	26,771.70	24,728.60	234,987.63	233,712.90	337,745.90	1,256,495.47
DESIGN/DEVEL & EXPER	56,107.61	0.00	0.00	50,975.13	2,756,045.70	1,586,039.24	4,449,167.68
TRAVEL	3,060,231.56	970,194.48	615,611.19	2,380,244.74	628,281.83	643,000.05	8,297,563.85
PUBLIC INFORMATION	22,690.96	520.44	215.01	39,816.52	0.00	11,913.41	75,156.34
OTHER GENERAL EXPENSES							
OCCUPANCY OF PREMISES	2,158,753.92	364,805.09	111,842.55	861,034.60	426,716.24	1,563,835.35	5,486,987.74
OFFICE EQUIP RENTAL	47,254.14	79,249.15	7,893.99	54,227.29	43,701.01	113,544.66	345,870.24
OFFICE EXP STATIONARY	283,280.58	26,571.94	62,883.92	211,586.20	170,946.16	387,517.89	1,142,786.69
ADP EQUIP RENTAL & SVC	2,558,202.32	574,265.65	48,158.73	1,036,463.31	4,616,044.14	6,387,018.14	15,220,152.29
ADP SUPPLIES	32,534.97	11,786.73	12,117.65	50,668.95	63,874.06	80,785.85	251,768.21
ADP SOFTWARE	81,318.44	36,742.98	17,649.45	192,236.24	145,627.45	263,202.72	736,777.29
COMMUNICATIONS	1,267,200.36	756,085.70	383,203.40	1,147,904.91	355,117.16	205,872.97	4,115,384.51
AUTO EQUIP EXPENSE	212,996.78	112,807.09	38,890.83	133,675.25	1,386.67	0.00	499,756.62
OPERATIONAL EQUIP EXP	43,895.52	469,672.18	0.00	36.78	0.00	0.00	513,604.48
OFFICE EQUIP & MAINT	6,120,374.49	530,797.85	289,805.72	542,972.61	1,216,011.46	1,173,289.93	9,873,252.07
MED EXP-CIV PERSONNEL	72,834.99	21,578.87	0.00	27,284.05	765.04	68,334.65	190,797.60
MAJOR REAL PROP M&R	44,670.93	0.00	0.00	79,149.95	223.27	18,143.90	142,188.05
CASH IN LIEU OF QUAR	0.00	1,587,205.83	504,727.26	508,725.40	0.00	0.00	2,600,658.50
DEPRECIATION CONT F/A	76,130.83		51,339.39	414,946.04	2,169,279.19	63,617.26	2,791,199.08
DEPRECIATION							
BASE OPERATING SUPPORT	0.00	0.00	0.00	2,505.69	115,825.65	18,497.99	136,829.34
DFAS ACCOUNTING	108,424.59	0.00	0.00	37,729.81	857,969.40	1,991,937.55	2,996,061.35
TRANSCOM	0.00	0.00	0.00	0.00	0.00	17,673,208.28	17,673,208.28
OTHER OVERHEAD EXPENSES	4,585,201.82	265,003.78	(316,319.40)	5,046,018.56	6,575,842.98	5,011,330.68	21,167,078.43
TOTAL OTHER GEN EXP	17,693,074.67	4,836,572.84	1,212,193.51	10,347,165.63	16,759,329.90	35,020,137.83	85,884,360.75
TOTAL GENERAL EXPENSES	$52,554,608.22	$11,548,606.89	$6,915,457.72	$38,925,317.86	$33,637,760.70	$62,562,252.76	$206,134,438.35

PERCENT CHANGE BY ACCOUNT CATEGORY

PERCENT CHANGE S&W FY 89-94	LANT	FE	EUR	PAC	MSC HQ	CONSOL MSC
REGULAR TIME CLASS	36.20%	18.14%	52.07%	42.55%	289980.62%	115.34%
OVERTIME CLASSIFIED	17.67%	-12.28%	-14.25%	14.95%	3897555.69%	73.97%
ANNUAL/SICK & MIL LEAVE	-24.86%	-43.26%	-8.77%	-14.22%		-4.83%
AWARDS & BONUSES	60.07%	-92.23%	257.81%	46.55%	50893.08%	100.72%
CONTINUATION OF PAY	11.16%	24.40%	32.62%	53.55%	3524.06%	87.95%
ASHORE MILITARY LABOR				123.38%		230.35%
REG TIME-UNCLASS	-28.60%	-100.00%	-41.95%			
OVERTIME-UNCLASS	-17.03%			-37.62%		-35.13%
ANN, SICK & MIL LEAVE	-58.81%			-90.87%		-69.64%
FOR NATL DIR LABOR	12.01%	-27.23%	12.77%	16.33%		-20.09%
FOR NATL DIR LABOR BEN	3.75%	-66.11%	3.79%			6.38%
FOR NATL INDIRECT LAB		-66.36%	-77.18%			-13.42%
TOTAL SAL & WAGES	35.42%	22.28%	53.74%	41.76%	273527.92%	-70.60%
						117.12%
RELATED EXPENSES						
EMPLR HLTH BEN CONT ASH	41.47%	-8.28%	27.91%	50.23%		
EMPLR RETIRE CONT CIV	1.48%	-47.73%	-24.29%	-3.64%		100.36%
EMPLR FED RET SYS ASHORE	49.55%	50.25%	55.07%	88.35%		44.66%
EMPLR RETIRE CONT FERS	148.71%	203.22%	189.48%	234.73%	44936.72%	143.29%
EMPLR LIFE INS CONT ASH	15.44%	-27.41%	37.16%	49.25%		314.84%
EMPLR SOC SEC CIV ASH	-97.91%	-39.24%		-40.49%		79.40%
EMPLR MED CIV ASH CSRS	129.76%	-238.04%	48.43%	95.79%		-64.47%
EMPLR FICA CIV ASH FERS	30.59%	-6.04%	8.81%	36.41%		179.89%
EMPLR FICA CIV ASH CSRS	-100.00%	-18.58%		-89.34%	-100.00%	79.64%
TOTAL REL EXP	40.56%	-20.18%	28.33%	47.49%	721492.85%	-88.37%
						103.97%
INDOCT & TRAINING	53.74%	197.88%	23.92%			
DESIGN/DEVEL & EXPER				-50.77%	1653.43%	57.86%
TRAVEL	6.05%	135.33%	29.82%	-91.87%	-24.82%	62.59%
PUBLIC INFORMATION	-39.00%	-20.51%	-92.94%	88.49%	299.01%	59.69%
OTHER GENERAL EXPENSES				49.85%		11.40%
OCCUPANCY OF PREMISES	17.36%	23.84%	-45.87%			
OFFICE EQUIP RENTAL	-18.46%	567.16%	-82.17%	-49.41%		35.73%
OFFICE EXP STATIONARY	-40.31%	-78.51%	29.89%	-72.11%		12.11%
ADP EQUIP RENTAL & SVC	1200.88%	91298.15%	-30.05%	-63.26%	6427.39%	-6.97%
ADP SUPPLIES	-57.91%	-7.62%	121.19%	14.31%	1649.10%	889.63%
ADP SOFTWARE	-1.90%	102.88%	15.89%	-32.39%		47.69%
COMMUNICATIONS	23.04%	100.94%	5.39%	-6.73%		128.57%
AUTO EQUIP EXPENSE	83.21%	8.87%	152.16%	59.75%	-2668.09%	65.92%
OPERATIONAL EQUIP EXP	2485.86%	68016.14%		-19.73%		24.37%
OFFICE QUIP & MAINT	311.57%	-18.05%	120.31%			21416.37%
MED EXP-CIV PERSONNEL	-8.82%	15.43%		-64.79%	5936.79%	157.93%
MAJOR REAL PROP M&R				122.93%		72.18%
CASH IN LIEU OF QUAR		76.74%	3.67%			
DEPRECIATION CONT F/A	1104.83%	-100.00%				84.36%
DEPRECIATION	-100.00%	-100.00%	-100.00%	-100.00%	-100.00%	41384.76%
BASE OPERATING SUPPORT						-100.00%
DFAS ACCOUNTING						
TRANSCOM						
OTHER OVERHEAD EXPENSES	-67.62%	125.78%	-2431.73%	2714.23%	-580.35%	57.62%
TOTAL OTHER GEN EXP	-10.62%	81.59%	-16.49%	61.28%	2473.02%	171.04%
TOTAL GENERAL EXPENSES	22.07%	53.79%	44.05%	55.43%	4404.67%	129.58%

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